

# Encyclopædia of Religion and Ethics

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# LISTS OF ABBREVIATIONS

## I. GENERAL

A.R. = Anno Hijrac (A.D. 622).  
 Ak. = Akkadian.  
 Alex. = Alexandrian.  
 Amer. = American.  
 Apoc. = Apocalypse, Apocalyptic.  
 Apocr. = Apocrypha.  
 Aq. = Aquila.  
 Arab. = Arabic.  
 Aram. = Aramaic.  
 Arm. = Armenian.  
 Ary. = Aryan.  
 As. = Asiatic.  
 Assyr. = Assyrian.  
 AT = Altes Testament.  
 AV = Authorized Version.  
 AVm = Authorized Version margin.  
 A.Y. = Anno Yazdagird (A.D. 639).  
 Bab. = Babylonian.  
 c. = *circa*, about.  
 Can. = Canaanite.  
 cf. = compare.  
 ct. = contrast.  
 D = Deuteronomist.  
 E = Elohist.  
 edd. = editions or editors.  
 Eryp. = Egyptian.  
 Eng. = English.  
 Eth. = Ethiopic.  
 EV, EVV = English Version, Versions.  
 f. = and following verse or page.  
 ff. = and following verses or pages.  
 Fr. = French.  
 Germ. = German.  
 Gr. = Greek.  
 H = Law of Holiness.  
 Heb. = Hebrew.  
 Hel. = Hellenistic.  
 Hex. = Hexateuch.  
 Himy. = Himyaritic.  
 Ir. = Irish.  
 Iran. = Iranian.

Isr. = Israelite.  
 J = Jahwist.  
 J' = Jehovah.  
 Jerus. = Jerusalem.  
 Jos. = Josephus.  
 LXX = Septuagint.  
 Min. = Minean.  
 MSS = Manuscripts.  
 MT = Massoretic Text.  
 n. = note.  
 NT = New Testament.  
 Onk. = Onkelos.  
 OT = Old Testament.  
 P = Priestly Narrative.  
 Pal. = Palestine, Palestinian.  
 Pent. = Pentateuch.  
 Pers. = Persian.  
 Phil. = Philistine.  
 Phoen. = Phœnician.  
 Pr. Bk. = Prayer Book.  
 R = Redactor.  
 Rom. = Roman.  
 RV = Revised Version.  
 RVm = Revised Version margin.  
 Sab. = Sabæan.  
 Sam. = Samaritan.  
 Sem. = Semitic.  
 Sept. = Septuagint.  
 Sin. = Sinaitic.  
 Skr. = Sanskrit.  
 Symm. = Symmachus.  
 Syr. = Syriac.  
 t. (following a number) = times.  
 Talm. = Talmud.  
 Targ. = Targum.  
 Theod. = Theodotion.  
 TR = Textus Receptus, Received Text.  
 tr. = translated or translation.  
 VSS = Versions.  
 Vulg., Vg. = Vulgate.  
 WH = Westcott and Hort's text.

## II. BOOKS OF THE BIBLE

### Old Testament.

Gn = Genesis.	Ca = Canticles.
Ex = Exodus.	Is = Isaiah.
Lv = Leviticus.	Jer = Jeremiah.
Nu = Numbers.	La = Lamentations.
Dt = Deuteronomy.	Ezk = Ezekiel.
Jos = Joshua.	Dn = Daniel.
Jg = Judges.	Hos = Hosea.
Ru = Ruth.	Jl = Joel.
1 S, 2 S = 1 and 2 Samnel.	Am = Amos.
1 K, 2 K = 1 and 2 Kings.	Ob = Obadiah.
1 Ch, 2 Ch = 1 and 2 Chronicles.	Jon = Jonah.
Ezr = Ezra.	Mic = Micah.
Neh = Nehemiah.	Nah = Nahum.
Est = Esther.	Hab = Habakkuk.
Job.	Zeph = Zephaniah.
Ps = Psalms.	Hag = Haggai.
Pr = Proverbs.	Zec = Zechariah.
Ec = Ecclesiastes.	Mal = Malachi.

### Apocrypha.

1 Es, 2 Es = 1 and 2 Esdras.	To = Tobit.
	Jth = Judith.

Ad. Est = Additions to Esther.	Sus = Susanna.
Wis = Wisdom.	Bel = Bel and the Dragon.
Sir = Sirach or Ecclesiasticus.	Pr. Man = Prayer of Manasses.
Bar = Baruch.	1 Mac, 2 Mac = 1 and 2 Maccabees.
Three = Song of the Three Children.	

### New Testament.

Mt = Matthew.	1 Th, 2 Th = 1 and 2 Thessalonians.
Mk = Mark.	1 Ti, 2 Ti = 1 and 2 Timothy.
Lk = Luke.	Tit = Titus.
Jn = John.	Philem = Philemon.
Ac = Acts.	He = Hebrews.
Ro = Romans.	Ja = James.
1 Co, 2 Co = 1 and 2 Corinthians.	1 P, 2 P = 1 and 2 Peter.
Gal = Galatians.	1 Jn, 2 Jn, 3 Jn = 1, 2, and 3 John.
Eph = Ephesians.	Jude.
Ph = Philippians.	Rev = Revelation.
Col = Colossians.	

## III. FOR THE LITERATURE

1. The following authors' names, when unaccompanied by the title of a book, stand for the works in the list below.

- Baethgen = *Beiträge zur sem. Religionsgesch.*, 1888.  
 Baldwin = *Dict. of Philosophy and Psychology*, 3 vols. 1901-05.  
 Barth = *Nominalbildung in den sem. Sprachen*, 2 vols. 1889, 1891 (<sup>2</sup>1894).  
 Benzinger = *Heb. Archäologie*, 1894.  
 Brockelmann = *Gesch. d. arab. Litteratur*, 2 vols. 1897-1902.  
 Bruns-Sachau = *Syr.-Röm. Rechtsbuch aus dem fünften Jahrhundert*, 1880.  
 Budge = *Gods of the Egyptians*, 2 vols. 1903.  
 Daremberg-Saglio = *Dict. des ant. grec. et rom.*, 1886-90.  
 De la Saussaye = *Lehrbuch der Religionsgesch.*<sup>3</sup>, 1905.  
 Denzinger = *Enchiridion Symbolorum*<sup>11</sup>, Freiburg im Br., 1911.  
 Deussen = *Die Philos. d. Upanishads*, 1899 [Eng. tr., 1906].  
 Doughty = *Arabia Deserta*, 2 vols. 1888.  
 Grimm = *Deutsche Mythologie*<sup>4</sup>, 3 vols. 1875-78, Eng. tr. *Teutonic Mythology*, 4 vols. 1882-88.  
 Hamburger = *Realencyclopädie für Bibel u. Talmud*, i. 1870 (<sup>2</sup>1892), ii. 1883, suppl. 1886, 1891 f., 1897.  
 Holder = *Altceltischer Sprachschatz*, 1891 ff.  
 Holtzmann-Zöpfel = *Lexicon f. Theol. u. Kirchenwesen*<sup>2</sup>, 1895.  
 Howitt = *Native Tribes of S.E. Australia*, 1904.  
 Jubainville = *Cours de Litt. celtique*, i.-xii., 1883 ff.  
 Lagrange = *Études sur les religions sémitiques*<sup>2</sup>, 1904.  
 Lane = *An Arabic-English Lexicon*, 1863 ff.  
 Lang = *Myth, Ritual, and Religion*<sup>2</sup>, 2 vols. 1899.  
 Lepsius = *Denkmäler aus Aegypten u. Aethiopien*, 1849-60.  
 Lichtenberger = *Encyc. des sciences religieuses*, 1876.  
 Lidzbarski = *Handbuch der nordsem. Epigraphik*, 1898.  
 McCurdy = *History, Prophecy, and the Monuments*, 2 vols. 1894-96.  
 Muir = *Orig. Sanscrit Texts*, 1858-72.  
 Müss-Arnolt = *A Concise Dict. of the Assyrian Language*, 1894 ff.  
 Nowack = *Lehrbuch d. heb. Archäologie*, 2 vols. 1894.  
 Pauly-Wissowa = *Realencyc. der classischen Altertumswissenschaft*, 1894 ff.  
 Perrot-Chipiez = *Hist. de l'art dans l'antiquité*, 1881 ff.  
 Preller = *Römische Mythologie*, 1858.  
 Réville = *Religion des peuples non-civilisés*, 1883.  
 Riehm = *Handwörterbuch d. bibl. Altertums*<sup>2</sup>, 1893-94.  
 Robinson = *Biblical Researches in Palestine*<sup>2</sup>, 1856.  
 Roscher = *Lex. d. gr. u. röm. Mythologie*, 1884 ff.  
 Schaff-Herzog = *The New Schaff-Herzog Encyclopedia of Religious Knowledge*, 1908 ff.  
 Schenkel = *Bibel-Lexicon*, 5 vols. 1869-75.  
 Schürer = *GJV*<sup>3</sup>, 3 vols. 1898-1901 [*HJP*, 5 vols. 1890 ff.].  
 Schwally = *Leben nach dem Tode*, 1892.  
 Siegfried-Stade = *Heb. Wörterbuch zum AT*, 1893.  
 Smend = *Lehrbuch der alttest. Religionsgesch.*<sup>2</sup>, 1899.  
 Smith (G. A.) = *Historical Geography of the Holy Land*<sup>4</sup>, 1897.  
 Smith (W. R.) = *Religion of the Semites*<sup>2</sup>, 1894.  
 Spencer (H.) = *Principles of Sociology*<sup>3</sup>, 1885-96.  
 Spencer-Gillen<sup>a</sup> = *Native Tribes of Central Australia*, 1899.  
 Spencer-Gillen<sup>b</sup> = *Northern Tribes of Central Australia*, 1904.  
 Swete = *The OT in Greek*, 3 vols. 1893 ff.  
 Tylor (E. B.) = *Primitive Culture*<sup>3</sup>, 1891 [<sup>4</sup>1903].  
 Ueberweg = *Hist. of Philosophy*, Eng. tr., 2 vols. 1872-74.  
 Weber = *Jüdische Theologie auf Grund des Talmud u. verwandten Schriften*<sup>2</sup>, 1897.  
 Wiedemann = *Die Religion der alten Aegypter*, 1890 [Eng. tr., revised, *Religion of the Anc. Egyptians*, 1897].  
 Wilkinson = *Manners and Customs of the Ancient Egyptians*, 3 vols. 1878.  
 Zunz = *Die gottesdienstlichen Vorträge der Juden*<sup>2</sup>, 1892.

2. Periodicals, Dictionaries, Encyclopædias, and other standard works frequently cited.

- AA = Archiv für Anthropologie.  
 AAOJ = American Antiquarian and Oriental Journal.  
 ABAW = Abhandlungen d. Berliner Akad. d. Wissenschaften.  
 AE = Archiv für Ethnographie.  
 AEG = Assyr. and Eng. Glossary (Johns Hopkins University).  
 AGG = Abhandlungen der Göttinger Gesellschaft der Wissenschaften.  
 AGPh = Archiv für Geschichte der Philosophie.  
 AHR = American Historical Review.  
 AHT = Ancient Hebrew Tradition (Hommel).  
 AJPh = American Journal of Philology.  
 AJP = American Journal of Psychology.  
 AJRPE = American Journal of Religious Psychology and Education.  
 AJSL = American Journal of Semitic Languages and Literature.  
 AJTh = American Journal of Theology.  
 AMG = Annales du Musée Guimet.  
 APES = American Palestine Exploration Society.  
 APF = Archiv für Papyrussforschung.  
 AR = Anthropological Review.  
 ARW = Archiv für Religionswissenschaft.  
 AS = Acta Sanctorum (Bollandus).  
 ASG = Abhandlungen der Sächsischen Gesellschaft der Wissenschaften.  
 ASoc = L'Année Sociologique.  
 ASWI = Archaeological Survey of W. India.  
 AZ = Allgemeine Zeitung.  
 BAG = Beiträge zur alten Geschichte.  
 BASS = Beiträge zur Assyriologie u. sem. Sprachwissenschaft (edd. Delitzsch and Haupt).  
 BCH = Bulletin de Correspondance Hellénique.  
 BE = Bureau of Ethnology.  
 BG = Bombay Gazetteer.  
 BJ = Bellum Judaicum (Josephus).  
 BL = Bampton Lectures.  
 BLE = Bulletin de Littérature Ecclésiastique.  
 BOR = Bab. and Oriental Record.  
 BS = Bibliotheca Sacra.  
 BSA = Annual of the British School at Athens.  
 BSAA = Bulletin de la Soc. archéologique à Alexandrie.  
 BSAL = Bulletin de la Soc. d'Anthropologie de Lyon.  
 BSAP = Bulletin de la Soc. d'Anthropologie, etc., Paris.  
 BSG = Bulletin de la Soc. de Géographie.  
 BTS = Buddhist Text Society.  
 BW = Biblical World.  
 BZ = Biblische Zeitschrift.

- CAIBL*=Comptes rendus de l'Académie des Inscriptions et Belles-Lettres.  
*CBTS*=Calcutta Buddhist Text Society.  
*CE*=Catholic Encyclopedia.  
*CF*=Childhood of Fiction (MacCulloch).  
*CGS*=Cults of the Greek States (Farnell).  
*CI*=Census of India.  
*CIA*=Corpus Inscript. Atticarum.  
*CIE*=Corpus Inscript. Etruscarum.  
*CIG*=Corpus Inscript. Graecarum.  
*CIL*=Corpus Inscript. Latinarum.  
*CIS*=Corpus Inscript. Semiticarum.  
*COT*=Cuneiform Inscriptions and the OT [Eng. tr. of *KAT*<sup>2</sup>; see below].  
*CR*=Contemporary Review.  
*CeR*=Celtic Review.  
*CLR*=Classical Review.  
*CQR*=Church Quarterly Review.  
*CSEL*=Corpus Script. Eccl. Latinorum.  
*DAC*=Dict. of the Apostolic Church.  
*DACL*=Dict. d'Archéologie chrétienne et de Liturgie (Cabrol).  
*DB*=Dict. of the Bible.  
*DCA*=Dict. of Christian Antiquities (Smith-Cheetham).  
*DCB*=Dict. of Christian Biography (Smith-Wace).  
*DCG*=Dict. of Christ and the Gospels.  
*DI*=Dict. of Islam (Hughes).  
*DNB*=Dict. of National Biography.  
*DPhP*=Dict. of Philosophy and Psychology.  
*DWA W*=Denkschriften der Wiener Akad. der Wissenschaften.  
*EBi*=Encyclopædia Biblica.  
*EBr*=Encyclopædia Britannica.  
*EEFM*=Egyp. Explor. Fund Memoirs.  
*EI*=Encyclopædia of Islâm.  
*ERE*=The present work.  
*Exp*=Expositor.  
*ExpT*=Expository Times.  
*FHG*=Fragmenta Historicorum Græcorum (coll. C. Müller, Paris, 1835).  
*FL*=Folklore.  
*FLJ*=Folklore Journal.  
*FLR*=Folklore Record.  
*GA*=Gazette Archéologique.  
*GB*=Golden Bough (Frazer).  
*GGA*=Göttingische Gelehrte Anzeigen.  
*GGN*=Göttingische Gelehrte Nachrichten (Nachrichten der königl. Gesellschaft der Wissenschaften zu Göttingen).  
*GIAP*=Grundriss d. Indo-Arischen Philologie.  
*GrP*=Grundriss d. Iranischen Philologie.  
*GJV*=Geschichte des jüdischen Volkes.  
*GVI*=Geschichte des Volkes Israel.  
*HAI*=Handbook of American Indians.  
*HDB*=Hastings' Dict. of the Bible.  
*HE*=Historia Ecclesiastica.  
*HGHL*=Historical Geography of the Holy Land (G. A. Smith).  
*HI*=History of Israel.  
*HJ*=Hibbert Journal.  
*HJP*=History of the Jewish People.  
*HL*=Hibbert Lectures.  
*HN*=Historia Naturalis (Pliny).  
*HWB*=Handwörterbuch.  
*IA*=Indian Antiquary.  
*ICC*=International Critical Commentary.  
*ICO*=International Congress of Orientalists.  
*ICR*=Indian Census Report.  
*IG*=Inscript. Græcæ (publ. under auspices of Berlin Academy, 1873 ff.).  
*IGA*=Inscript. Græcæ Antiquissimæ.  
*IGI*=Imperial Gazetteer of India<sup>2</sup> (1885); new edition (1908-09).  
*IJE*=International Journal of Ethics.  
*ITL*=International Theological Library.  
*JA*=Journal Asiatique.  
*JAFL*=Journal of American Folklore.  
*JAI*=Journal of the Anthropological Institute.  
*JAOS*=Journal of the American Oriental Society.  
*JASB*=Journal of the Anthropological Society of Bombay.  
*JASBe*=Journ. of As. Soc. of Bengal.  
*JBL*=Journal of Biblical Literature.  
*JBTS*=Journal of the Buddhist Text Society.  
*JD*=Journal des Débats.  
*JDTb*=Jahrbücher f. deutsche Theologie.  
*JE*=Jewish Encyclopedia.  
*JGOS*=Journal of the German Oriental Society.  
*JHC*=Johns Hopkins University Circulars.  
*JHS*=Journal of Hellenic Studies.  
*JLZ*=Jenäer Literaturzeitung.  
*JPh*=Journal of Philology.  
*JPTb*=Jahrbücher für protestantische Theologie.  
*JPTS*=Journal of the Pali Text Society.  
*JQR*=Jewish Quarterly Review.  
*JRAI*=Journal of the Royal Anthropological Institute.  
*JRAS*=Journal of the Royal Asiatic Society.  
*JRASBo*=Journal of the Royal Asiatic Society, Bombay branch.  
*JRASC*=Journal of the Royal Asiatic Society, Ceylon branch.  
*JRASK*=Journal of the Royal Asiatic Society, Korean branch.  
*JRGS*=Journal of the Royal Geographical Society.  
*JRS*=Journal of Roman Studies.  
*JThSt*=Journal of Theological Studies.  
*KAT*<sup>2</sup>=Die Keilinschriften und das AT<sup>2</sup> (Schrader), 1833.  
*KAT*<sup>3</sup>=Zimmern-Winckler's ed. of the preceding (really a totally distinct work), 1903.  
*KB* or *K/B*=Keilinschriftliche Bibliothek (Schrader), 1889 ff.  
*KGF*=Keilinschriften und die Geschichtsforschung, 1878.  
*LCEI*=Literarisches Centralblatt.  
*LOPh*=Literaturblatt für Oriental. Philologie.  
*LOT*=Introduction to Literature of OT (Driver).  
*LP*=Legend of Perseus (Hartland).  
*LSSt*=Leipziger sem. Studien.  
*M*=Mélusine.  
*MAIBL*=Mémoires de l'Acad. des Inscriptions et Belles-Lettres.  
*MBAW*=Monatsbericht d. Berliner Akad. d. Wissenschaften.  
*MGH*=Monumenta Germaniæ Historica (Pertz).  
*MGJV*=Mittheilungen der Gesellschaft für jüdische Volkskunde.  
*MGWJ*=Monatsschrift für Geschichte und Wissenschaft des Judentums.  
*MI*=Origin and Development of the Moral Ideas (Westermarck).  
*MNDPV*=Mittheilungen u. Nachrichten des deutschen Palästina-Vereins.  
*MR*=Methodist Review.  
*MVG*=Mittheilungen der vorderasiatischen Gesellschaft.  
*MWJ*=Magazin für die Wissenschaft des Judentums.  
*NBAC*=Nuovo Bullettino di Archeologia Cristiana.  
*NC*=Nineteenth Century.  
*NHWB*=Neuhebräisches Wörterbuch.  
*NINQ*=North Indian Notes and Queries.  
*NKZ*=Neue kirchliche Zeitschrift.  
*NQ*=Notes and Queries.  
*NR*=Native Races of the Pacific States (Bancroft).  
*NTZG*=Neutestamentliche Zeitgeschichte.  
*OED*=Oxford English Dictionary.  
*OLZ*=Orientalische Literaturzeitung.  
*OS*=Onomastica Sacra.  
*OTJC*=Old Testament in the Jewish Church (W. R. Smith).  
*OTP*=Oriental Translation Fund Publications.  
*PAOS*=Proceedings of American Oriental Society.

<i>PASB</i> = Proceedings of the Anthropological Soc. of Bombay.	<i>SBAW</i> = Sitzungsberichte d. Berliner Akademie d. Wissenschaften.
<i>PB</i> = Polychrome Bible (English).	<i>SBB</i> = Sacred Books of the Buddhists.
<i>PBE</i> = Publications of the Bureau of Ethnology.	<i>SBE</i> = Sacred Books of the East.
<i>PC</i> = Primitive Culture (Tylor).	<i>SBOT</i> = Sacred Books of the OT (Hebrew).
<i>PEFM</i> = Palestine Exploration Fund Quarterly Memoirs.	<i>SDB</i> = Single-vol. Dict. of the Bible (Hastings).
<i>PEFSt</i> = Palestine Exploration Fund Statement.	<i>SK</i> = Studien und Kritiken.
<i>PG</i> = Patrologia Græca (Migne).	<i>SMA</i> = Sitzungsberichte d. Münchener Akademie.
<i>PJB</i> = Preussische Jahrbücher.	<i>SSGW</i> = Sitzungsberichte d. Kgl. Sächs. Gesellsch. d. Wissenschaften.
<i>PL</i> = Patrologia Latina (Migne).	<i>SWAW</i> = Sitzungsberichte d. Wiener Akademie d. Wissenschaften.
<i>PNQ</i> = Punjab Notes and Queries.	<i>TAPA</i> = Transactions of American Philological Association.
<i>PR</i> = Popular Religion and Folklore of N. India (Crooke).	<i>TASJ</i> = Transactions of the Asiatic Soc. of Japan.
<i>PRE</i> <sup>3</sup> = Prot. Realencyclopädie (Herzog-Hauck).	<i>TC</i> = Tribes and Castes.
<i>PRR</i> = Presbyterian and Reformed Review.	<i>TES</i> = Transactions of Ethnological Society.
<i>PRS</i> = Proceedings of the Royal Society.	<i>ThLZ</i> = Theologische Literaturzeitung.
<i>PRSE</i> = Proceedings Royal Soc. of Edinburgh.	<i>ThT</i> = Theol. Tijdschrift.
<i>PSBA</i> = Proceedings of the Society of Biblical Archaeology.	<i>TRHS</i> = Transactions of Royal Historical Society.
<i>PTS</i> = Pali Text Society.	<i>TRSE</i> = Transactions of Royal Soc. of Edinburgh.
<i>RA</i> = Revue Archéologique.	<i>TS</i> = Texts and Studies.
<i>RAnth</i> = Revue d'Anthropologie.	<i>TSBA</i> = Transactions of the Soc. of Biblical Archaeology.
<i>RAS</i> = Royal Asiatic Society.	<i>TU</i> = Texte und Untersuchungen.
<i>RAssyr</i> = Revue d'Assyriologie.	<i>WAI</i> = Western Asiatic Inscriptions.
<i>RB</i> = Revue Biblique.	<i>WZKM</i> = Wiener Zeitschrift f. Kunde des Morgenlandes.
<i>RBEW</i> = Reports of the Bureau of Ethnology (Washington).	<i>ZA</i> = Zeitschrift für Assyriologie.
<i>RC</i> = Revue Critique.	<i>ZA</i> = Zeitschrift für ägypt. Sprache u. Altertumswissenschaft.
<i>RCel</i> = Revue Celtique.	<i>ZATW</i> = Zeitschrift für die alttest. Wissenschaft.
<i>RCh</i> = Revue Chrétienne.	<i>ZCK</i> = Zeitschrift für christliche Kunst.
<i>RDM</i> = Revue des Deux Mondes.	<i>ZCP</i> = Zeitschrift für celtische Philologie.
<i>RE</i> = Realencyclopädie.	<i>ZDA</i> = Zeitschrift für deutsches Altertum.
<i>REG</i> = Revue des Études Grecques.	<i>ZDMG</i> = Zeitschrift der deutschen morgenländischen Gesellschaft.
<i>REG</i> = Revue Égyptologique.	<i>ZDPV</i> = Zeitschrift des deutschen Palästina-Vereins.
<i>REJ</i> = Revue des Études Juives.	<i>ZE</i> = Zeitschrift für Ethnologie.
<i>REth</i> = Revue d'Ethnographie.	<i>ZKF</i> = Zeitschrift für Keilschriftforschung.
<i>RGG</i> = Die Religion in Geschichte und Gegenwart.	<i>ZKG</i> = Zeitschrift für Kirchengeschichte.
<i>RHLR</i> = Revue d'Histoire et de Littérature religieuses.	<i>ZKT</i> = Zeitschrift für kathol. Theologie.
<i>RHR</i> = Revue de l'Histoire des Religions.	<i>ZKWL</i> = Zeitschrift für kirchl. Wissenschaft und kirchl. Leben.
<i>RM</i> = Revue du monde musulman.	<i>ZM</i> = Zeitschrift für die Mythologie.
<i>RN</i> = Revue Numismatique.	<i>ZNTW</i> = Zeitschrift für die neuest. Wissenschaft.
<i>RP</i> = Records of the Past.	<i>ZPhP</i> = Zeitschrift für Philosophie und Pädagogik.
<i>RPh</i> = Revue Philosophique.	<i>ZTK</i> = Zeitschrift für Theologie und Kirche.
<i>RQ</i> = Römische Quartalschrift.	<i>ZVK</i> = Zeitschrift für Volkskunde.
<i>RS</i> = Revue sémitique d'Épigraphie et d'Hist. ancienne.	<i>ZVRW</i> = Zeitschrift für vergleichende Rechtswissenschaft.
<i>RSA</i> = Recueil de la Soc. archéologique.	<i>ZWT</i> = Zeitschrift für wissenschaftliche Theologie.
<i>RSI</i> = Reports of the Smithsonian Institution.	
<i>RTAP</i> = Recueil de Travaux relatifs à l'Archéologie et à la Philologie.	
<i>RTP</i> = Revue des traditions populaires.	
<i>RThPh</i> = Revue de Théologie et de Philosophie.	
<i>RTr</i> = Recueil de Travaux.	
<i>RVV</i> = Religionsgeschichtliche Versuche und Vorarbeiten.	
<i>RWB</i> = Realwörterbnch.	

[A small superior number designates the particular edition of the work referred to, as *KAT*<sup>2</sup>, *LOT*<sup>6</sup>, etc.]

Thus, if no reason is given, we assume that, when the Yuchi Indians in some of their dances imitate the movements and cries of their totem-animals, they are doing them honour.<sup>1</sup> The Zuni dance before sacred tortoises may be 'to intercede with the ancestral spirits, incarnate in the animals.'<sup>2</sup>

The secret societies of the Nass River Indians possess as heir-looms ceremonial dances in one of which the performers practise cannibalism; in another they eat dogs; in a third they break objects with a long club, paying for the destroyed property with property of higher value.<sup>3</sup> The last detail is akin to the system of potlatch.

In the bear-dance of the Timagami Indians the men and women form a large circle, with a leader to direct operations. 'The circle of dancers led by the chief, who carries a drum and sings the bear-dance song, then starts around counter-clockwise. The leader sometimes dances backwards, turns around, stoops, and in other ways imitates the bear. . . . The circling keeps up until the song is finished. The idea of this dance seems to be to honour the bear by imitating him.'<sup>4</sup> In another dance of the same people, the duck-dance, the movements of a flock of ducks and drakes are represented by the evolutions of the dancers, in swerving chain-figures. It is curious to note that such a dance is interlarded with European steps—a modern waltz turn or two is introduced 'between the movements. At the close the performers quack two or three times. 'This is purely a pleasure-dance.'<sup>5</sup>

Pantomime is recognized as an educative process in elementary schools to-day, simple operations, such as sowing and reaping, being represented by appropriate movements.<sup>6</sup>

A good illustration of the pantomimic dance as fine art with a touch of superstition remaining, or revived for artistic effect, is found among the Malays. In their monkey-dance pantomime represents the spirit of a monkey entering the girl-dancer as she is rocked in a cot. Then she imitates the behaviour of a monkey, and performs some remarkable tree-climbing.<sup>7</sup>

In pantomime itself the drama is more important than in pantomimic dancing, as it is, e.g., in the ceremonial dances of the Australians and American Indians. The representation of a dramatic story in dumb show, with more or less of dancing movement, is the ballet of Europe and the pantomime of ancient Rome. Under the Roman Empire this form of dancing attained extraordinary popularity, superseding other shows, and with it remarkable artistic excellence. The *fabulae salticae* used plots from old mythology, a love-motive being the favourite. The best poets of the day were commissioned to write the scenarios, which seem at times to have been drawn from contemporary life. The modern cinema picture-drama is a close parallel, but in the *fabula saltica* an explanatory recitative was sung by a chorus accompanied by an orchestra.<sup>8</sup>

In another form, parallel to modern skirt-dancing, the dancer represented all the action of the various characters by the movements of his body and the manipulation of a long cloak.<sup>9</sup>

The modern ballet, in common with artistic dancing generally, dates from the 15th century. The great Renaissance included a new birth of dancing. Probably the tradition of the Roman *pantomimi* assisted the institution. From Italy the ballet passed to France, where it was perfected as the *ballet d'action*.<sup>10</sup>

<sup>1</sup> GEB, pt. v., *Spirits of the Corn and of the Wild*, ii. 76.

<sup>2</sup> *Ib.* ii. 179.

<sup>3</sup> E. Sapir, *Geol. Survey of Canada*, Ottawa, 1916 (Bulletin 19), p. 28.

<sup>4</sup> Skeat, *Malay Magic*, p. 465.

<sup>5</sup> *Ib.*

<sup>6</sup> See Ellis, vi. 74.

<sup>7</sup> L. C. Purser, in Smith's *Dict. of Gr. and Rom. Antiq.*, s.v. 'Pantomimus', ii. 334 f. See Sueton. *Nero*, 64, *Tit.* 7, *Calig.* 57; Macrobi. ii. 7; Ovid, *Ars Am.* i. 696; Lucian, *de Saltatione*.

<sup>8</sup> Purser, *loc. cit.*

<sup>9</sup> EBRII, s.v. 'Ballet', iii. 269 f. It is there defined as 'a theatrical representation in which a story is told only by gesture, accompanied by music, which should be characterized by stronger emphasis than would be employed with the voice.' The etymology of *ballet*, *ballad*, *ball*, etc., is doubtful. Skeat and the OED refer them to L. Lat. *ballare*, 'to dance'; the former favours a connexion with the Sicilian Gr. βαλλίζειν, 'to dance', but the origin of βαλλίζειν (? βάλλειν) is uncertain. Some derive from *balla* (ball) 'on the alleged ground that in the Middle Ages tennis was accompanied with dancing and song' (OED). Neither of the classic authorities on tennis (Julian Marshall, in *The Annals of Tennis*, London, 1878; J. J. Jusserand, *Les Sports et jeux d'exercice dans l'ancienne France*, Paris, 1901) corroborates the musical accompaniment of tennis. E. B. Tylor thought that these words came from the Græco-Roman ball-dance.

10. Dancing as a social pastime.—Artistic and dramatic dancing has frequently and among various peoples been placed under a social ban, in the same way and for the same reasons as the drama. More rarely this has been the case with dancing as a social pastime. Apart from ceremonial dancing in religious worship, Greeks and Romans and most Eastern peoples, while encouraging dancing as a form of entertainment—e.g., at banquets—have refused to admit it as a social pastime. There is thus a professional class. The Malays never dance themselves, but will pay well for good professional dancing.<sup>1</sup> Roman dancers were *infames*.<sup>2</sup> But as a professional class they had an important though unofficial status, like that of the *bayaderes* of India, the *geishas* of Japan, or the *almehs* of Egypt. Even religious dancing developed a professional class, if the *qd'heshôth*, e.g., of Hebrew sanctuaries may be so described.<sup>3</sup>

In the history of the world's art the great dancing geniuses, such as Taglioni and Pavlova, are entitled to a position only second to that of great singers and musical composers.

The use of dancing as a social pastime is comparatively modern. Plato was in favour of boys and girls dancing together. The only approximation to this was the *δρμος*, in which boys and girls danced in counter-formation.<sup>4</sup> The 15th cent. renaissance of dancing in Italy passed to France, which has been termed 'the school' of the art of dancing, and Spain its 'true home'.<sup>5</sup> It is outside the scope of this article to discuss the development of this form of dancing, which belongs to the sphere of pastime. But it may be noted that the evolution of the art throws much light on the evolution of society and the individual, and in a more clear-cut manner than the evolution of music. For, in the case of dancing, the whole system is involved. As in music, so in dancing, stages of evolution, 'schools', have developed a method, to be superseded by another. Among typical movements may be mentioned the *pavane*; its character was professional. The minuet has been described as the 'fine flower of the art'.<sup>6</sup> But actually it expresses merely an artificial code of courtesy. The type of pair-dancing is the waltz, a dance of uncertain origin.<sup>7</sup>

When in contact with European culture, native peoples throughout the world soon assimilate European dances; e.g., the people of Ceram (E. Indies) have adopted the waltz.<sup>8</sup> Conversely, the higher cultures assimilate the dances of the simpler peoples, and the ephemeral popularity of the tango and 'ragtime' serves to illustrate the continuity of human physical evolution.

LITERATURE.—The authorities quoted in the article supply satisfactory data, but there are no treatises written on any scientifically comprehensive lines.

A. E. CRAWLEY.

PRODIGES AND PORTENTS.—I. INTRODUCTORY.—1. Interpretation of prodigies.—What fortune or misfortune the prodigy portends is determined for the individual by the culture to which he belongs. Its origin in the culture is properly matter of historical research, for the same interpretation may have had different origins, and different interpretations may have the same objective cause, the respective similarity and difference representing the varied reactions of the cultures in question. Were the interpretations given by differ-

<sup>1</sup> Skeat, *Malay Magic*, p. 458.

<sup>2</sup> C. L. Souvay, in *CE*, s.v. 'Dancing', iv. 619.

<sup>3</sup> *JE* iv. 425.

<sup>4</sup> G. E. Marindia, in Smith's *Dict. of Gr. and Rom. Antiq.*, s.v. 'Saltatio', ii. 594; Plato, *Legg.* vi. 771.

<sup>5</sup> EBRII vii. 798.

<sup>6</sup> *Ib.* 797b.

<sup>7</sup> *Ib.* 799b; French *volte*, from the *Volta* of Provence; German *has walzen*, 'to revolve.'

<sup>8</sup> J. G. F. Riedel, *De Skuik- en kroesharige rassen tusschen Selebes en Papua*, The Hague, 1886, p. 130.

ent cultures wholly arbitrary, they would not present such thoroughgoing, or even such partial, resemblance. Some of the resemblances may be attributed to cultural diffusion, where the phenomenon is really continuous in development, overflowing, as it were, the cultural bounds within which it originates. The classical cultures are good instances, for here we have historical proof of the diffusion, such proof, in the nature of the case, being very difficult to obtain in primitive society, where tribal tradition is an unsafe guide. The spontaneous effect of the phenomena upon the mind is, however, in some cases such as, if not to rule out diffusion, at least to make this supposition superfluous. The eclipse and the earthquake, e.g., never portend good. The reason is not far to seek: earthquakes never effect any good, and frequently leave disaster in their train; the completion of what the eclipse partly effects, in bringing about a diminution of light, would be the culmination of disasters; darkness has ever been the harbinger of evils which the garish light of day dissipates.<sup>1</sup>

In many other instances the prodigy points its own moral, though one largely determined by the predisposition of the people who interpret it (as, e.g., Napoleon's 'sun of Austerlitz'). Whether or not the inference made is historically true, the following passage shows that the suggestion of the interpretation grows out of the nature of the event:

'At the time of the amplification and enlarging [of the village from which Milan grew] by Bellonesus there happened a very strange accident, which gave occasion of the denomination. For when it was new building, a certain wilde Sow that came forth of an olds ruinous house very early in the morning, hapned to meet some of those that were set a worke about the building of the city. This Sow had halfe her body covered with hard bristly haire as other Pigges are, and the other halfe with very soft and white wool: which portentum, Bellonesus took for a very happy and ominous token, so that he caused the city to be called Mediolanum from the halfe-wooled Sow. What his reason was why he should esteem this strange spectacle for such a luckie token I know not but I conjecture it might be this: perhaps he supposed that the bristly haire might presage strength and puissance in his subjects, and the wooll plenty of necessary means that might tend to the clothing of their bodies.'<sup>2</sup>

2. The realm of the unknown.—The unknown is highly charged with mystic power. Many peoples, like the Thonga, have added faith in foreign medicines just because they come from a distant land.<sup>3</sup> For this reason the Bakongo seldom engage the medicine-man of their own village.

'They know too much about him to waste their money on him. They flout him and send for the medicine-man of another village of whom they know little or nothing.'<sup>4</sup>

In the skill with which iron is worked there is something mystical. Among the Bakongo, as among many of the tribes of Africa and of India, the blacksmith holds an honourable position, or is despised and feared. Similarly, the forge is often regarded as a sacred place, and respect is shown towards the anvil and the fire.<sup>5</sup>

In the Middle Ages this superstitious fear and dread attached to the higher learning and superior skill.

A good instance of this tendency is the attitude taken towards Michael Scot, an Irishman of the 13th cent. who narrowly escaped being an archbishop over the see of Cashel. 'He was so widely renowned for his varied and extensive learning that he was credited with supernatural powers; a number of legends grew up around his name which hid his real merit, and transformed the man of science into a magician. In the Border country traditions of his magical power are common. Boccaccio alludes to "a great master in necromancy, called Michael Scot," while Dante places him in the eighth circle of

Hell"—all because his learning was beyond the comprehension of his fellows. In the 14th cent. similar magic powers were attributed to Gerald, the fourth earl of Desmond, solely on account of his learning.<sup>1</sup> In Ireland, during the witchcraft superstition, many women were put to death on the charge of using black magic solely because of their skill in elms and their knowledge of the medicinal value of herbs—just such skill and knowledge as have given rise to our present pharmacopœia

The realm of the unknown is peopled by many monstrous beings. This is especially true of the celestial regions and what are, for the people in question, the remoter parts of the earth. In the moon and on parts of the earth, say the Eskimos, are manlike creatures without head or neck, but having a broad mouth, armed with sharp teeth, across the chest.<sup>2</sup> Many tribes in Africa have similar beliefs. They prevailed in Europe until a century ago.<sup>3</sup> In fact, the disposition to make monsters out of the distant and poorly-known is as old as history. The early Babylonians reported an attack by a strange people who had the bodies of birds and the faces of ravens, whose dwelling-place was in the mountains to the north of Mesopotamia.

3. The psychology of prodigies.—(a) *Recognition of events as prodigious*.—What phenomena are recognized as prodigies and what importance attaches to them depends upon the state of mind, social and individual. The wise man, as Seneca<sup>4</sup> has expressed it, is not moved with the utmost violences of fortune, nor with the extremities of fire and sword, whereas a fool is afraid of his own shadow, and surprised at all accidents, as if they were all levelled at him. As Pliny<sup>5</sup> says, the Romans could not be sure of anything, not even that a person was dead; there are, in fact, many examples of the dead returning to life, in some cases after the funeral pyre had been lighted and the flames had proceeded too far to permit rescue. There are critical moments when the mind, group and individual, is especially liable to harbour hallucinations and to magnify the ordinary into something prodigious. Intense expectancy gives exaggerated proportions to every event which is extraordinary, and heightened anticipation leaps forward into supposititious realization. The politico-religious fervour of the down-trodden Jews affords many illustrations.

Prior to the revolt in Judea which broke out in A.D. 66 this expectancy gave life and permanency to a host of terrifying rumours, which, in turn, fanned the fervour into greater vagaries. 'Neo dreamed only of signs and omens; the apocalyptic hue of Jewish fancy stained everything with a bloody halo. Comets, swords in the sky, battles in the clouds, light breaking forth of itself from the depth of the sanctuary, victims at the moment of sacrifice bringing forth a monstrous progeny,—these were the tales told with horror from mouth to mouth. One day the vast brazen gates of the Temple had flown open of themselves and refused to close. At the Passover of A.D. 65, about 3 a.m., the Temple was for half an hour lighted as bright as day; some thought that it was on fire. Again, at Pentecost, the priests heard a sound as of many persons in the interior, making hasty preparations as if for flight, and saying to one another, "Let us depart hence!" The great disturbance of mind was itself the best of signs that something extraordinary was about to happen.'<sup>6</sup>

The devil you know is better than the devil you don't know, and the latter always excels in power and malignity.

An observer of the Iroquois has declared that no Iroquois lives who would not in the night-time quail at seeing a bright light the nature of which he did not understand.<sup>7</sup> The Jesuits who visited the Huron in 1653 found them entertaining 'a superstitious regard for everything which savoured a little of the uncommon. If, for instance, in their hunt they had difficulty in killing a bear or a stag, and on opening it they found in its head or in the entrails a bone, or a stone, or a serpent, etc.,

<sup>1</sup> Cf. F. Ratzel, *The Hist. of Mankind*, Eng. tr., i. 49.

<sup>2</sup> T. Coryat, *Crudities*, London, 1611, i. 114.

<sup>3</sup> H. A. Junod, *The Life of a S. African Tribe*, Neuchâtel, 1912-13, ii. 414; R. M. Lawrence, *Primitive Psychotherapy and Quackery*, London, 1910.

<sup>4</sup> J. H. Weeks, *Among the Primitive Bakongo*, London, 1914, p. 285.

<sup>5</sup> *Id.* p. 93.

<sup>1</sup> St. John D. Seymour, *Irish Witchcraft and Demonology*, Dublin, 1913, p. 52 f.

<sup>2</sup> E. W. Nelson, in *13 RBEW* [1899], p. 442.

<sup>3</sup> See, e.g., Lord Monboddo, *Of the Origin and Progress of Language*, Edinburgh, 1774-92, i.; *PC*<sup>3</sup>; Ratzel, *Hist. of Mankind*.

<sup>4</sup> *Quæst. Nat.* vi. 1.

<sup>5</sup> *HN* vii. 53.

<sup>6</sup> E. Renan, *The Anti-Christ*, Paris, 1876, ch. x.

<sup>7</sup> *13 RBEW* [1883], p. 63.



they said that such object was an *oki*, that is, an enchantment which gave strength and vigor to the animal, so that it could not be killed; and they used it as the superstitious do reliquaries, in order to be always prosperous.<sup>1</sup>

In many parts of England and of America a crowing hen is considered very unlucky and can by no means be permitted to strut and fret with impunity:

'A whistling woman and a crowing hen  
Always come to some bad end.'

The Australian is somewhat afraid of the unique and weird 'Ha! ha!' and 'Hoo! hoo!' of the laughing jackass.<sup>2</sup> The Ainus find it wise not to imitate the cry of any unknown bird, for strange birds are often sent by the devil and carry about the seeds of disease.<sup>3</sup> Double fruits in bananas, nuts, etc., being somewhat out of the ordinary, are believed in N. Queensland to be made by certain invisible beings. The Romans were similarly impressed with the presence of a double 'head' of the liver of a victim, as also by the absence of a 'head.'<sup>4</sup>

When the devout Brahman ascetic heard the elephant talking to a tree, he exclaimed in amazement, 'Ha! what is this wonder, that an elephant should speak with an intelligible voice, and that I should understand him?'<sup>5</sup>

Those trees are regarded as sinister and are considered inauspicious which are never propagated from seed, and bear no fruit.<sup>6</sup> It portends evil when the cultivated olive changes into the wild, and the white grape or fig becomes wild. It was an evil portent when, upon the arrival of Xerxes at Laodicea, a plane-tree was transformed into an olive and sank into the earth shortly before the civil wars of Pompeius Magnus began, leaving only a few of the branches protruding from the ground. The Sibylline Books were consulted, and it was found that a war of extermination was impending, which would be attended with greater carnage the nearer it approached the city of Rome. Another kind of prodigy is the springing up of a tree in some extraordinary and unusual place—e.g., the head of a statue, an altar, or another tree. A fig-tree shot forth from a laurel at Cyzicus, just before the siege of that city; in like manner, at Tralles, a palm issued from the pedestal of the statue of the dictator Caesar, at the period of his civil wars. So, too, at Rome, in the Capitol, in the time of Perseus, a palm-tree grew from the head of the statue of Jupiter—a presage of impending victory and triumphs. This palm having been destroyed by a tempest, a fig-tree sprang up in the very same place, at the period of lustration made at a time at which, according to Piso, 'an author of high authority,'<sup>7</sup> all sense of shame had been utterly banished. 'Above all the prodigies that have ever been heard of, however, we ought to place the one that was seen in our own time, at the period of the fall of the Emperor Nero, in the territory of Marrucinum; a plantation of olives, belonging to Vectius Marcellus, one of the principal members of the Equestrian order, bodily crossed the highway, while the fields that lay on the opposite side of the road passed over to supply the place which had been thus vacated by the olive-yard.'<sup>8</sup>

The fear of ghosts is universal.

When the supposedly dead Gersaint, hero of the *Mabinogion*, rose up and slew one of the assembled company, 'all left the board and fled away. And this was not so much through fear of the living as through the dread they felt at seeing the dead man rise up to slay them.'<sup>9</sup> It was natural for Teigue O'Neill, the Irish blacksmith, when he discovered that the rider of the horse was a ghost, to 'recoil with a terrified prayer.'<sup>10</sup>

This fear is not a fear of physical injury, but a fear far transcending this. In this territory all natural restraint breaks down.

Horror was on the faces of the friends of a certain John Browne of Durlay when, as he lay dying in the year 1654, they saw a great iron triple-locked chest, which stood at the foot of the bed, 'begin to open, lock by lock, without the aid of any visible hand, until at length the lid stood upright.'<sup>11</sup>

Horror would be on our faces too, if we accepted the fact that there was no natural explanation. There is no other attitude to take in the presence of events that shatter our every-day working categories.<sup>12</sup>

(b) *Religious aspect.*—The concepts and emotions that harbour prodigies, and find in them a wealth of mystic meaning, have much in common with the religious attitude. Disasters of all kinds are recognized as the inflictions of an angry god. Pindar's remark, 'I ween there is no marvel impos-

<sup>1</sup> *Jesuit Relations*, ed. R. G. Thwaites, Cleveland, U.S.A., 1896-1901, xxxix. 25.

<sup>2</sup> R. Brough Smyth, *The Aborigines of Victoria*, London, 1878, i. 25.

<sup>3</sup> J. Batchelor, *The Ainu and their Folklore*, London, 1901, p. 126.

<sup>4</sup> *HN* xi. 73.

<sup>5</sup> F. W. Bain, *The Ashes of a God*, London, 1911, p. 3.

<sup>6</sup> *HN* xvi. 45. <sup>7</sup> *Ib.* xvii. 38. <sup>8</sup> *Ib.*

<sup>9</sup> T. Bulfinch, *Age of Chivalry*, Philadelphia, 1900, pt. ii. ch. vii.

<sup>10</sup> Seymour, p. 72 ff.

<sup>11</sup> *Ib.* p. 104.

<sup>12</sup> See W. D. Wallis, *AJRPE* v. [1912] 257-304, vi. [1913] 228-272, vii. [1914] 266.

sible if gods have wrought thereto,<sup>1</sup> is profoundly true. The divine nature of the ruler himself was, from the time of Alexander the Great to that of the Roman emperors of the 1st cent. and even longer, evidenced by oracles, portents, and supernatural displays of various sorts.

The Christian army of Ferdinand of Spain, when besieging the Moors in the stronghold of Mochling, near Granada, discharged from their guns inextinguishable combustibles. One of these, which passed high through the air like a meteor, sending out sparks and crackling as it went, entered the window of a tower which was used as a magazine of gunpowder. The tower blew up with a tremendous explosion. . . . The Moors, who had never witnessed an explosion of the kind, ascribed the destruction of the tower to a miracle. Someone had seen the descent of the flaming ball, imagined that fire had fallen from heaven to punish them for their pertinacity. The pious Agapida, himself, believes that this fiery missile was conducted by divine agency to confound the infidels; an opinion in which he is supported by other Catholic historians.<sup>2</sup> Thus each interpreted the event in a way that fitted in with his intellectual background, while both parties found in its superhuman and, for them, supernatural character something of the divine. When, later, the Spanish forces had suffered a year of discouraging reverses with scarcely a bright spot in all their campaigns against the Moors, the unusually severe storms which swept the land seemed to have a sinister meaning, and suggested visitations from on high. High winds prevailed and rains deluged the land, overflowing the valleys, undermining the houses, and drowning the flocks. 'A vast black cloud moved over the land, accompanied by a hurricane and a trembling of the earth. Houses were unroofed, the walls and battlements of fortresses shaken, and lofty towers rocked to their foundations. Ships, riding at anchor, were either stranded or swallowed up; others, under sail, were tossed to and fro upon mountain waves, and cast upon the land, where the whirlwind rent them in pieces and scattered them in fragments in the air. . . . Some of the faint-hearted,' adds Antonio Agapida (the Spanish chronicler), 'looked upon this torment of the elements as a prodigious event, out of the course of nature. In the weakness of their fears, they connected it with those troubles which occurred in various places, considering it a portent of some great calamity, about to be wrought by the violence of the bloody-handed El Zagal and his fierce adherents.'<sup>3</sup>

A like interpretation was given by the inhabitants of Constance, in Switzerland, of a terrific storm of rain and hail which came upon some encamped soldiers, on a Sunday night (8th May 1642), when 'all the tents were in a thrice blown over. It was not possible for any match to keep fire, or any sojourner to handle his musket or yet to stand. . . . Our sojourners, and some of our officers too (who suppose that no thing which is more than ordinary can be the product of nature) attributed this hurrikan to the devilish skill of some Irish witches.'<sup>4</sup>

The catastrophic drives men to their wits' end, and even beyond the bounds of reason. He who is deterred by no clearly apprehended danger becomes panic-stricken in the face of mysterious forces. The feeling of human inability to cope with the situation intensifies the individual's helplessness. There is nothing to do but cringe and hope.

'For what can one believe quite safe,' asks Seneca, 'if the world itself is shaken, and its most solid parts totter to their fall? Where, indeed, can our fears have limit if the one thing immovably fixed, which upholds all other things in dependence on it, begins to rock, and the earth lose its chief characteristic, stability? What refuge can our weak bodies find? Whither shall anxious ones flee when fear springs from the ground and is drawn up from the earth's foundations? If roofs at any time begin to crack and premonitions of fall are given, there is general panic: all hurry pell-mell out of doors, they abandon their household treasures, and trust for safety to the public street. But if the earth itself stir up destruction what refuge or help can we look for? If this solid globe which upholds and defends us, upon which our cities are built, which has been called by some the world's foundation, stagger and remove, whither are we to turn?'<sup>5</sup>

When there is public alarm through fall of cities, burying of whole nations, and shaking of earth's foundations, what wonder that minds in the distraction of suffering and terror should wander forth bereft of sense? Indeed, on no occasion will one find more instances of raving prophets than when mingled terror and superstition have struck men's hearts. The Malakand tribes that attacked the British in 1897, under the leadership

<sup>1</sup> *Pyth.* x. 49 f.

<sup>2</sup> Washington Irving, *Chronicle of the Conquest of Granada*, 2 vols., Philadelphia, 1829, ch. xliii.

<sup>3</sup> *Ib.* ch. lxi.

<sup>4</sup> Seymour, p. 99, quoting T. Fitzpatrick, *The Bloody Bridge* Dublin, 1903, p. 127.

<sup>5</sup> *Quæst. Nat.* vi. 1.

of the Mad Mullah, are one of many examples of a people assailed by supernatural terrors and doubts, lured by hopes of celestial glory, and taught to expect prodigious events.<sup>1</sup>

II. HISTORY.—1. The Greek view of prodigies.—According to Empedocles, the various parts of animals had a separate existence. Heads grew supported by no necks, arms wandered about detached from shoulders, and disembodied eyes pierced the solitudes. These several parts united, forming in some cases normal creatures, but, because of their vagarious juxtaposition, in some cases monstrosities, such as man-headed oxen. The normal ones, being better adapted to the conditions of life, survived, while the monsters perished because of their maladjustment.

The stress of the times always heightened the interest in prodigies. Thus, during the Peloponnesian War there were earthquakes unparalleled in their extent and fury, and eclipses of the sun more numerous than are recorded to have happened in any former age, if we are to believe Thucydides.<sup>2</sup> Again, while Xerxes was leading his army into Greece, prodigies of his defeat were not wanting: a mare gave birth to a hare, signifying, says Herodotus, that Xerxes would return fleeing for his life, and a mule brought forth a colt with the organs of both sexes.<sup>3</sup> Again, when the Persian army approached the temple at Delphi, numerous prodigies appeared: the sacred arms transported themselves outside the temple; thunder struck two crags above the heads of the barbarian force and brought them down upon the foe with considerable mortality.<sup>4</sup> Two days after the olive-tree in the Erechtheum had been burned down, a shoot a cubit long had sprung up from the stump.<sup>5</sup> Salt fish that were being fried leaped from the pan; this signified that the deceased Protesilaus would leap from the dead and avenge himself on the one who had wronged him.<sup>6</sup>

By reading the horoscope Greek astrologers were able to predict the birth of monstrosities. If there was disjunction (*ἀσύνδερα*) between all or most of the recognized proper positions of the planets, a monstrous birth might be expected. It would not be of human birth if the planets in question were in the sign of one of the animals.<sup>7</sup>

2. The Roman view.—The speculations of Empedocles found place in the philosophy of the Romans. The earth in the beginning produced various monsters that sprang up with wonderful faces and limbs. But these 'prodigies and portents' were generated to no purpose, for nature abhorred and prevented their increase.<sup>8</sup> Pliny<sup>9</sup> speaks of races having but one eye, and that in the middle of the forehead—veritable Polyphemoi. Some had their feet turned backwards; they could proceed with wonderful velocity, and wandered about indiscriminately with the wild beasts. Some peoples were partly male and partly female. Some had only one leg, but with a foot so large that they could lie down in the shade of it. Some had no noses, some no mouths, subsisting upon odours, and needing neither meat nor drink. Some lived to be 400 years old.

Livy relates three prodigious births: at Frusino, a lamb with a sow's head; at Sinuessa, a pig with a human head; among the Lucani, a foal with five feet.<sup>10</sup> Women gave birth to elephants, to serpents, to hippocentaurs.<sup>11</sup> The birth of more than three children at one birth was looked upon by the

Romans as portentous. During the reign of Augustus the birth of four children at one birth was quickly followed by a famine.

In the troublous times following immediately upon Nero's reign, and inaugurated by it, there appeared through the Roman world loathsome spectres, monsters born of slime, and prodigies of every sort. Prominent among these were monstrous births, especially cases where several heads were possessed by the progeny. To the Roman mind each of these represented an emperor. Real or pretended hybrids were given a similar interpretation. A hog with claws like a hawk's was accepted as a perfect image of Nero.<sup>1</sup>

Bright lights sometimes proceeded from the heavens during the night-time, as though the day had suddenly ventured to intrude; a burning shield was seen to dart across the sky at sunset, from west to east, scintillating. In one case a spark fell from a star, increasing in size as it approached the earth, until it attained the magnitude of the moon, shining as through a cloud. It afterwards returned into the heavens and was converted into a *lampas*. Stars moved about in various directions.<sup>2</sup> A bow, or a circle of red, might suddenly appear about the sun.

In ancient Rome it rained milk, blood, a flesh which did not putrefy, wool, iron, and baked tiles. During the war with the Cimbri, and at other times, the air was filled with the rattling of arms and the sound of trumpets. Armies were seen marching, countermarching, and fighting, and the heavens themselves were seen in flames.<sup>3</sup> In the district of Mutina two mountains rushed together, falling upon each other with a very loud crash, and then receding; in the daytime flame and smoke issued from them. There was the usual great crowd of witnesses. All the farmhouses were thrown down by the shock, and many of the animals in them were killed. This heralded the Social War, which was even more disastrous for Italy. Near Harpasa, in Asia, was a large rock which could be moved by the finger, but not if the entire body was applied to it. Near the river Indus a certain mountain had such attraction for iron that, if shoes containing iron were placed on it, they could not be withdrawn, while another repelled iron to such an extent that the foot within a shoe containing iron could not rest upon it. In several places things pushed into the ground could not be pulled out.

Prodigies might appear at any time, but they were especially frequent in time of political or national danger or disaster. In the year in which Fabius Maximus was for the third time elected to the consulship the sea appeared on fire; at Sinuessa a cow brought forth a colt; the statues in the temple of Juno Sospita, Lanuvium, sweated blood, and a shower of stones fell in the neighbourhood of that temple.

'On account of this shower the nine days' sacred rite was celebrated, as is usual on such occasions, and the other prodigies were carefully expiated.'<sup>4</sup>

Prodigies announced from many places while Hannibal was threatening Rome augmented the terror. In Sicily several darts of the soldiers had taken fire; in Sardinia the staff of a horseman who was going his rounds upon a wall took fire as he held it in his hand; the shores were frequently ablaze; at Præneste two shields sweated blood; at Arpi red-hot stones fell from the heavens; at Capena shields appeared in the heavens, and the sun fought with the moon; two moons rose during one day; the fountain of Hercules flowed with spots of blood; in Antium bloody ears of grain fell into the basket as the people were reaping; at

<sup>1</sup> W. L. S. Churchill, *Story of the Malakand Field Force*, London, 1898, p. 38.

<sup>2</sup> i. 23. <sup>3</sup> Herod. vii. 57.

<sup>4</sup> *Ib.* viii. 37-39.

<sup>5</sup> *Ib.* 55. <sup>6</sup> *Ib.* ix. 120.

<sup>7</sup> A. Bouché-Leclercq, *L'Astrologie grecque*, Paris, 1899, p. 399 f.

<sup>8</sup> Lucretius, v. 837. <sup>9</sup> *HN* vii. 2.

<sup>10</sup> xxvii. 37, xxxi. 12.

<sup>11</sup> *HN* vii. 3; Val. Maximus, vi. 5. i. 6.

<sup>1</sup> Tacitus, *Ann.* xii. 64; Phlegon, *Περί Θαυμασίων*.

<sup>2</sup> *HN* ii. 29-37. <sup>3</sup> *Ib.* ii. 29-34, 57-60.

<sup>4</sup> Livy, xxiii. 31.

Falerii the heavens appeared cleft as if with a great chasm, and from the cleft came a vast light; the prophetic tables suddenly diminished in size, and one fell out, on which appeared the inscription, 'Mars shakes his spear.' The statue of Mars at Rome, on the Appian Way, sweated at the sight of images of wolves; at Capua the heavens seemed to be on fire, and the moon appeared to be falling amid the rain. This must, indeed, have been good preparation for smaller wonders.

'After these,' says Livy, 'credit was given to prodigies of less magnitude: that the goats of certain persons had horned wool; that a hen had changed herself into a cock; and a cock into a hen; these things having been laid before the senate, as reported, the authors being conducted into the senate-house, the consul took the sense of the fathers on religious affairs. It was decreed that these prodigies should be expiated, partly with full-grown, partly with sucking, victims.'<sup>1</sup>

Later, in the Punic War, another flood of prodigies aroused new fear to supplement the old. Crows had torn some gold in the Capitol with their beaks and had eaten it; at Antium mice gnawed a golden crown; an immense quantity of locusts, coming apparently from nowhere, filled the whole country around Capua; at Reate a foal with five feet was born; at Anagnia scattered fires appeared in the sky and were followed by a meteor; at Arpinum the earth sank into an immense gulf, in a place where the ground was level; the 'head' of the liver was absent from the first victim immolated by one of the consuls. These prodigies were expiated by offerings and sacrifices.<sup>2</sup>

A circle of stars near the moon was visible when Augustus entered Rome, after the death of his father, to assume the name by which he was afterwards known.<sup>3</sup> Shakespeare is following ample precedent in announcing the ominous appearance of five moons immediately after the death of Prince Arthur.<sup>4</sup>

3. The early Christian view.—The spirit of evil, typified by the Roman power or by the violent party of Jerusalem, as the case may be, is a dragon which pours out a flood of water to sweep away the Church (Rev 12<sup>13-15</sup>). The concept is possibly of Babylonian or Egyptian origin,<sup>5</sup> though it is found also in Mazdæism.<sup>6</sup> The false prophet or Antichrist is especially liable to representation as some prodigy. The 'false prophet' whom the writer of the Apocalypse represents as an ally of Nero is a wonder-worker who causes fire to fall from the sky, graven images to live and speak, and who puts the 'mark of the beast' upon men (13<sup>14-17</sup> 16 19). Elsewhere (13<sup>11</sup>) the false prophet is a monster, speaks like a dragon, and has 'two horns like a lamb.' Nor are there lacking elements of the prodigious in that hated Antichrist, the emperor Nero, whose life has been likened to the discordant cries of a grotesque witches' revel.

In the bloody troublous days of Nero meteors and celestial signs received heightened attention.

'Comets, eclipses, mock-suns, northern lights, in which appear crowns, awards, and streaks of blood, fantastic forms of clouds in time of heat, with traces of battles or strange beasts,—drew eager attention and seemed never to have been so vivid as in these tragic years. All the talk was of showers of blood, of wonderful thunder-bolts, of rivers flowing up-stream, or of bloody torrents. A thousand things never noticed in ordinary times came to have a high importance in the feverish excitement of the public mind.'<sup>7</sup>

Christ Himself had prophesied that nation would rise against nation, kingdom against kingdom; there would be earthquakes, terrors, famines, pestilences on all sides, and great signs in the sky (Mt 24<sup>6-8</sup>, Mk 13<sup>7-8</sup>, Lk 21<sup>9-11</sup>). The prophecy had

<sup>1</sup> xxii. 1.

<sup>2</sup> *Ib.* xxii., xxx.

<sup>3</sup> *HN* ii. 28; Seneca, *Quæst. Nat.* l. 2; Vell. Paternulus, ii. 59.

<sup>4</sup> *King John*, act iv. sc. ii.

<sup>5</sup> C. Clemen, *Primitive Christianity*, Eng. tr., Edinburgh, 1912, pp. 127-137.

<sup>6</sup> N. Söderblom, *La Vie future d'après le Mazdæisme*, Paris, 1901, p. 258.

<sup>7</sup> Renan, ch. xiv.

its ample fulfilment in the near future. The famine came in the year 68; inundation from the Tiber in 69 and from the sea along the coast of Lycia; the pestilence visited Rome in 65, carrying off 30,000 inhabitants; Lyons was swept in the same year by a devastating conflagration, and the Campania by scarcely less destructive cyclones and tornadoes; tempests spread terror broadcast, and nature seemed everywhere perverse. It was a prevalent belief that portents, hiding of the sun and moon in darkness, brandishing of swords in the sky, were to usher in the Messianic kingdom.<sup>1</sup> This view—that calamities were signs of the Messiah's approach—was in vogue among the Jews for many centuries after the time of Christ.<sup>2</sup>

Similar interpretations, inherited no doubt from Rome, were rife as late as the 9th cent., and persisted through the Middle Ages. It was during a wild storm that Cromwell passed away; for had not the devil come to carry off his soul? Numerous and more terrible were the omens heralding the death of Charlemagne, recounted by his contemporary and biographer, Eginhard:

There were frequent eclipses, both solar and lunar, and a black spot appeared for seven days on the sun, during the last three years of his life; the gallery between the basilica and the palace fell suddenly in ruin; accidental fire consumed the wooden bridge over the Rhine at Mayence—both gallery and bridge had been constructed by Charlemagne; during his last campaign into Saxony a ball of fire fell suddenly from the heavens with a great light. 'It rushed across the clear sky from right to left, and everybody was wondering what was the meaning of the sign, when the horse which he was riding gave a sudden plunge, head foremost, and fell.' His javelin was struck from his hand with a violence that sent it twenty feet away. The palace at Aix-la-Chapelle frequently trembled, the roofs of whatever buildings he tarried in kept up a continual crackling noise, the basilica was struck by lightning, and the gilded hall that adorned the pinnacle of the roof was shattered by the thunder-bolt and hurled upon the bishop's house adjoining.<sup>3</sup>

III. ANIMALS.—1. Divination.—Divination is by no means confined to the classical cultures.

It is practised by means of lice in the Torres Straits, and on the island of Mer is a divinatory shrine where omens are taken from the movements of insects, lizards, and other animals.<sup>4</sup> The Kirghiz divine by means of the shoulder-blade of a sheep; the Buriats use the shoulder-blade of a sheep or a goat in divining the cause of disease or for the discovery of a thief. A written law was given by God to the chief tribal ancestor of the Buriats, who, on his way home to his own people, fell asleep under a haystack. A ewe came to the stack and ate up all the law as well as the hay, but the law remained engraved on the ewe's shoulder-blade.<sup>5</sup> The Kayans of Borneo cast bears' teeth as dice by way of divination, and the Igorot resort to divination with chickens. Before going to battle the Samoans observe the movements of a lizard in a bundle of spears. If it runs about the points of the spears and the outside of the bundle, it is a good omen; if it works its way into the centre for concealment, it is a bad omen. If a lizard comes down on the bare post rather than on the matting which partly covers it, this is a bad portent; similarly if it crosses the path of a man going to battle.<sup>6</sup> The Thonga preserve, as useful for divinatory purposes, the astragalus of a smaller animal found in the stulhs of a hyena—a most uncommon discovery.<sup>7</sup>

See, further, artt. DIVINATION.

2. Omens.—Omens likewise are common among primitive people.

The flocking of vultures denotes impending war, it being the habit of these birds to prey upon the bodies of the slain.<sup>8</sup> The snake portends death to a Bushman.<sup>9</sup> Among the Thonga it is a bad omen for a mole to cross one's path.<sup>10</sup> The screech of the eagle informed the Takelma that some one would be killed

<sup>1</sup> G. F. Fisher, *The Beginnings of Christianity*, Edinburgh, 1878, p. 250; Clemen, pp. 137-139.

<sup>2</sup> Renan, ch. xiv.; Mishnâh, *Sôfâh*, ix. 15.

<sup>3</sup> *MGH*, tr. S. E. Turner, New York, 1880, p. 72; see, further, *DCG*, s.v. 'Wonders,' 'Earthquake,' and *DAC*, s.v. 'Dreams.'

<sup>4</sup> *Camb. Anth. Exped. to Torres Straits Reports*, Cambridge, 1901-12, v. [1904] 361; *Ethn. Coll. Brit. Mus.* 138.

<sup>5</sup> *JAL* xxiv. [1894] 89.

<sup>6</sup> G. Turner, *Samoa*, London, 1884, p. 47.

<sup>7</sup> Junod, ii. 499.

<sup>8</sup> A. B. Ellis, *The Yoruba-speaking Peoples*, London, 1894, p. 119.

<sup>9</sup> W. H. I. Bleek, *A Brief Account of Bushman Folk-Lore*, London, 1875, p. 20.

<sup>10</sup> Junod, ii. 321; see also R. H. Nassau, *Fetichism in West Africa*, London, 1904, pp. 194-200; D. Kidd, *The Essential Kafir*, London, 1904, pp. 272-274.

by an arrow. When a snake crosses a person's path, it is a sign that one of his relatives will die; if a rattlesnake bites a person's shadow, it is a sign that he will vomit.<sup>1</sup> The Yana declare it a bad sign if a fox 'talks' before daybreak.<sup>2</sup> If the rail-bird flies before a Samoan war party, it is a good omen; if it is a bad omen if seen to fly in any other direction. If a certain fish swims rapidly, the Samoans go to battle cheerfully; but, if it turns round now and then on its back, the party would not dare to proceed.<sup>3</sup> The flight of the owl is a good or a bad omen according to the direction taken. If the cuttle-fish is close to shore when the party is about to set out, it is a good sign; if far away, a bad sign. Evil is portended when the sea-eel is driven upon the shore—as often happens after a gale—and the event creates a commotion throughout that locality. If the heron flies before the war party, it is a good sign; but, if it flies across the path, this is a bad omen. The appearance of the creeper-hird in the morning or in the evening means that one's prayers are accepted, while its failure to appear means that the god is angry. If the teeth of the sperm-whale, after being placed in position, lie east and west, it is a good omen; while, if they point towards the north or south, it is a bad omen. A war party will return if a lizard is seen crossing its path.<sup>4</sup>

In Borneo an expedition, prepared by months of labour, will turn homeward if had omens are observed—e.g., if a particular hird calls on a certain side or flies across the river in some particular fashion; and a newly-married pair will separate if on the wedding day the cry of a deer is heard near the house. Similar beliefs prevail among the Todas.<sup>5</sup>

In Holland, as early as 1611, the presence of a stork upon a house was looked upon as a good omen, and its leave-taking as a bad omen.<sup>6</sup>

3. The crow and the raven.—The English rustic who pronounces a curse on the ill-betiding croak of the crow might well be considered the inheritor of the Roman belief that the crow is a bird of ill-omened garrulity and especially inauspicious at the time of incubation, i.e. just after the summer solstice. In the Shetlands the raven is believed to keep close to a house in which there is a corpse, and in Northumberland the cry of the raven is an omen of ill-luck. In rustic England the raven has generally been considered a bird of ill omen. A similar belief is current on the west coast of Africa, where the white-breasted raven is called a man-eater, and magic medicine is manufactured from it. No rain falls when it lays its eggs—the exact contrary of the belief prevailing in the western part of the United States. Its flocking portends impending war.<sup>7</sup> Pliny declares that ravens are most direfully ominous when they swallow their voice, as if being choked. They are unique among birds in having a comprehension of the meaning of their auspices. When the guests of Medus were assassinated, all the ravens departed from the vicinity of Attica and the Peloponnesus. Both Alexander and Cicero were warned of approaching death by the raven. In some instances, however, the presence of the raven betokened divine favour.<sup>8</sup>

4. The owl.—In *Hiranyakeśin Grhyasūtra* the owl that flies to the abode of the gods is addressed with the words:

'Flying round the village from left to right, portend us luck by thy cry, O owl!'<sup>9</sup>

*Striges*, 'screech-owls,' was the Roman appellation for witches. The horned owl was especially funereal and greatly abhorred in all auspices of a public nature. Its appearance in the city was a dire omen, though its perching on a private house portended no ill. During the consulship of S. Palpeius Hister and L. Pedaninus one entered the very sanctuary of the Capitol, in consequence of which the city was purified on the nones of March in that year, as also again in the consulship of L. Cassius and C. Marius (A.U.C. 647).<sup>10</sup> The note of an owl heard on the left annuls the auspicious note of other birds.<sup>11</sup> The note of the *strix* and

the presence or cry of the *bubo* bode ill.<sup>1</sup> The Ainu say that the owl can bewitch people by its hoot, and its cry must not be imitated. The eagle owl is especially respected. To imitate its cry would be nothing short of blasphemy, though the bird is regarded as benevolent. Among the titles given it are 'divine little bird,' 'servant of the world,' 'mediator of the world.' When about to sacrifice one of them, the Ainu offer the following prayer:

'Beloved deity, we have brought you up because we loved you, and now we are about to send you to your father. We herewith offer you food, *Inao*, wine, and cakes; take them to your parent, and he will be very pleased. When you come to him say, "I have lived a long time among the Ainu, where an Ainu father and an Ainu mother reared me. I now come to thee. My father, hear me, and hasten to look upon the Ainu and help them."<sup>2</sup>

In one Samoan village the god was said to be incarnate in the owl. If an owl flew ahead of a party going to fight, it was regarded as favourable; but, if it flew across the road or towards the rear, it was unfavourable.<sup>3</sup> Among the Yao the owl was a favourite companion of the witch, and Thesalian women used its feathers as a magic ingredient. In Shetland the old women say that a cow will give bloody milk if it is frightened by an owl, and will fall sick and die if touched by it. Screech-owls are ghosts among the Arapaho, and in many American tribes the owl is regarded as a bird of ill omen or of magic power, as, notably, in the south-west area. With the Navaho it is a sort of bugaboo used to frighten children into submission.

IV. NATURAL PHENOMENA. — I. *Aurora borealis*.—The Mandans say that the northern lights are occasioned by a large assembly of medicine-men and distinguished warriors of several northern nations who boil their prisoners and slain enemies in huge cauldrons. The Eskimos say that they are the ghosts of the dead playing football with a walrus skull.<sup>4</sup> To the Malecite they represented blood and portended war. The Tlingit share with the Eskimos the belief that the northern lights are the spirits of the dead at play,<sup>5</sup> while the Saulteaux say they are the spirits of the dead dancing.<sup>6</sup> The *aurora borealis* heralded the defeat at sea of the Lacedæmonians and the loss of their influence in Greece. This 'flame of a bloody appearance (and nothing is more dreaded by mortals) which falls down upon the earth'<sup>7</sup> appeared again when King Philip was harassing Greece. Pliny is inclined to interpret it as due to natural causes, but does not deny its association with untoward events:

'They have indeed been the precursors of great events, but I conceive that the evils occurred not because the prodigies took place, but that these took place because the evils were appointed to occur at that period. Their cause is obscure in consequence of their rarity.'<sup>8</sup>

2. Earthquakes. — According to Pliny,<sup>9</sup> the Babylonians attributed earthquakes to the influence of the stars when in a certain conjunction with the sun or with one another. The Greeks attributed thunder and earthquakes to one and the same cause, the former to agitation of the air above the earth, the latter to disturbances in the air beneath the earth. Yet, in spite of the scientific theories, such as we find in Aristotle<sup>10</sup> or Herodotus,<sup>11</sup> an earthquake was a portent by which

<sup>1</sup> JAFI xx. [1910] 49.  
<sup>2</sup> E. Sapir, *Yana Texts* (Univ. of Pennsylvania Museum Publications), Philadelphia, 1910, pp. 221 f., 221-223.  
<sup>3</sup> Turner, p. 34.  
<sup>4</sup> Cf. II RBEW [1894], p. 477 f.  
<sup>5</sup> W. H. E. Rivers, *The Todas*, London, 1906, pp. 201, 273.  
<sup>6</sup> Coryat, i. 38.  
<sup>7</sup> R. F. Burton, *Mission to Gelele*, London, 1864, ii. 246 f.  
<sup>8</sup> HN x. 15.  
<sup>9</sup> HN x. 161.  
<sup>10</sup> HN x. 161.  
<sup>11</sup> Lucan, v. 295.

<sup>1</sup> Tihullus, l. v. 61; Seneca, *Herc. Fur.* 688; Statius, *Theb.* iii. 610 ff.; Ovid, *Met.* vi. 431 f., x. 452 f., xv. 791; Silius Ital. viii. 637; Ovid, *Ibis*, 223. See E. W. Martin, *The Birds of the Latin Poets*, s.vv. 'Buho,' 'Spinturnicium,' 'Strix,' ap. Leland Stanford, Jr., *Univ. Publications Stanford Univ.*, California, 1914, pp. 43-46, 200-203.  
<sup>2</sup> Batchelor, pp. 408-429.  
<sup>3</sup> E. W. Hawkes, *The Labrador Eskimo* (Anthropological Series of Geological Survey, no. 14), Ottawa, 1916, p. 137.  
<sup>4</sup> 26 RBEW [1903], p. 452.  
<sup>5</sup> Coll. Minn. Hist. Soc., Minneapolis, 1886, ii. 233.  
<sup>6</sup> HN ii. 27.  
<sup>7</sup> HN ii. 27.  
<sup>8</sup> Meteorology.  
<sup>9</sup> Turner, pp. 24-26.  
<sup>10</sup> Aristotle, *Met.* ii. 1.  
<sup>11</sup> Herodotus, ii. 104.

the deity intimated to men the evils that were about to befall them. During the 2nd cent. of our era, when earthquakes were both frequent and frightful in their destruction of cities, the Stoic philosophers, feeling the old explanation insufficient to account for such disasters, attributed them to the displeasure of the gods—a view which later Christian theology welcomed and made popular. The earthquakes which were so prevalent in the region of the Bay of Naples in the 1st cent. A.D. were interpreted by Christians as signs of divine wrath visiting deserved punishment upon the wicked and licentious Romans; and the latter also regarded them as supernatural. Lucretius, following Epicurus, Democritus (water and air), and Anaxagoras (fire and air), ascribes earthquakes to the fall of great substances beneath the earth as well as to air escaping from subterranean caverns. Seneca attributes them to escaping air.<sup>1</sup>

Earthquakes occurring during the day or a little after sunset are heralded by a long thin cloud extending over the clear sky. The water in wells is more turbid than usual and emits a disagreeable odour. Birds settle upon vessels at sea and give the alarm. Yet so ominous are earthquakes that Pliny, who is inclined to find their cause in subterranean winds, declares that the city of Rome never experienced a shock which was not the forerunner of some great calamity.<sup>2</sup>

The Japanese once held that the magnet loses its power during an earthquake or even immediately prior to one. They attributed earthquakes to movements of a tortoise, on which the earth rests, or to the flapping of a large subterranean fish, which, when it wakes, wriggles about and causes the vibrations. During a severe earthquake masses of people can be seen, robed in white, some of them on their knees, attempting to appease the wrath of the gods or demons who are responsible for the disturbance.<sup>3</sup> The Indians of the southwestern part of the United States have a similar belief. They say that the shaking of the earth is caused by the wriggling of a large subterranean serpent or dragon. The Tlingit attribute them to Old-woman-underneath.<sup>4</sup> This is almost identical with the belief prevalent in Melanesia and Polynesia. The Arabs regard an earthquake as the will of Allah and resign themselves to it calmly, not anticipating any greater calamity. The Caribs attribute earthquakes to a subterranean people.<sup>5</sup> The natives of Bali and the Pagi Islands attribute them to evil spirits, as do the Mao Naga. With these peoples, as also among the ancient Hindus and in ancient Rome, a tabu was placed on all ordinary occupations; a Brāhman might not read the Veda. Earthquakes were so common in Rome in the year 193 B.C. that all public business was blocked, and during the following year shocks lasting thirty-eight days called for a total cessation of business. As late as the time of the emperor Claudius an earthquake was always followed by the appointment of a holiday for the performance of sacred rites.<sup>6</sup> After the occurrence of an earthquake during a battle Earth would be appeased.<sup>7</sup> In the first centuries A.D. the pagan Romans usually attributed them to displeasure towards the Christians.<sup>8</sup> In the 8th cent., Bede<sup>9</sup> attributes earthquakes to the leviathan in his subterranean prison, who, in his indignation, shakes the earth. Aristotle's view

was generally championed by the later mediæval theologians (as by Cardinal d'Ailly, *Concordia astronomice veritatis cum theologia*, Paris, 1483); yet in 1580, during the reign of Queen Elizabeth, earthquakes were generally considered by the clergy as evidence of God's wrath—a view popular in the New England States as late as the last half of the 18th cent., and revived on the Pacific coast after the earthquake of 1906 which destroyed San Francisco.

3. Eclipses.—The Chaldæans explained eclipses on the supposition that one half of the moon was bright, the other half dark. When she suddenly turned the bright side away from men and presented to them her dark visage, they had evidence of her displeasure. Some event of importance—a pestilence, a famine, a war, an earthquake—followed hard upon each eclipse. For the Greeks, similarly, an eclipse boded no good. It signified the turning aside of the face of the god and the approach of a dire crisis. The moon hid the sun, and the sun fell into a swoon, or *ἐκλειψις* (*défaillance*). The moon, assisted by the other planets, then provided the energy which the sun temporarily could not supply.

Xerxes [remarking an eclipse of the sun] was seized with alarm, and, sending at once for the Magians, inquired of them the meaning of the portent. They replied: "God is forshowing to the Greeks the destruction of their cities; for this sun foretells for them and the moon for us." So Xerxes, thus instructed, proceeded on his way with great gladness of heart.<sup>1</sup> An eclipse caused Cleombrotus to bring his army home.

For while he was offering sacrifice to know if he should march out against the Persian, the sun was suddenly darkened in mid sky.<sup>2</sup>

In 585 B.C. a sudden eclipse of the sun caused the fighting Medes and Lydians to lay down their arms and hastily make peace; and the Athenian expedition which was about to depart from Syracuse in 413 B.C., after ignominious defeat, was delayed by an eclipse of the moon which filled the soldiers with fear. Thales was reputed able to predict an eclipse of the sun and to account satisfactorily for the phenomenon. Pythagoras likewise explained eclipses as natural phenomena, as did Aristotle and Pliny. The Egyptians also attempted to explain them as part of normal celestial occurrences and to predict them.<sup>3</sup> Lucretius explains eclipses of the sun and moon in the modern way,<sup>4</sup> as do Seneca<sup>5</sup> and Livy.<sup>6</sup> Livy says that Cains Sulpicius Gallus, military tribune, 'lest they should any of them consider the matter a prodigy,' foretold to the army an eclipse of the moon on the following night. He refers also to the custom of making a din during an eclipse of the moon, presumably to frighten away the beast that is devouring it.<sup>7</sup> Pliny admits, with his prevalent inconsistency of reason and superstition, that many eclipses are portentous, especially such as are unusually long. This was the case when Cæsar was slain, as in the war against Antony, when the sun remained dim for almost an entire year. Driving away an eclipse by beating drums and cymbals is referred to by Tacitus.<sup>8</sup> The inhabitants of Turin long continued this practice.<sup>9</sup>

The Armenians believed eclipses of the moon to be caused by the interposition of a dark body between it and the earth during the earth's revolution about the moon.<sup>10</sup> Orthodox Hindus look upon an eclipse as the arrest of the sun by his creditors, Rāhu and Ketu. They accordingly

<sup>1</sup> *Quæst. Nat.* vi. 6-32.

<sup>2</sup> *HN* ii. 83.

<sup>3</sup> R. B. Hubbard, *U.S. in the Far East*, Richmond, Va., 1899, p. 108; W. Tyndale, *Japan and the Japanese*, New York, 1910, p. 151 f.

<sup>4</sup> *26 RBEW*, p. 452.

<sup>5</sup> *30 RBEW* [1915], p. 378 f.

<sup>6</sup> Livy, i. 31, fil. 5, vil. 28, xxi. 62, xxv. 7, et al.

<sup>7</sup> Florus, *Hist.* i. 19.

<sup>8</sup> See W. E. H. Lecky, *Hist. of European Morals*, London, 1888, New York, 1910, i. 408.

<sup>9</sup> *de Nat. Rer.* xlix. (PL xc. 275).

<sup>1</sup> Herod. vii. 37.

<sup>2</sup> *Id.* ix. 10.

<sup>3</sup> Bouché-Leclercq, pp. 48-49, 246, 333, 354, 581; H. R. Hall, *Ancient Hist. of the Near East*, London, 1907, p. 18; *HN* ii. 7.

<sup>4</sup> vi. 753.

<sup>5</sup> *xxvii.* 4.

<sup>6</sup> *Ann.* i. 28.

<sup>7</sup> R. Ceillier, *Hist. gén. des auteurs sacrés et ecclésiastiques*, Paris, 1858-69, xiv. 607.

<sup>10</sup> *ERE* i. 797b.



give alms and observe a fast during the eclipse. There is another belief to the effect that it is caused by a demon, called Svarbhanu.<sup>1</sup> This is similar to the Chinese belief that the sun or moon is being swallowed by a dog or other beast. They accordingly beat gongs to rescue it by frightening away the devourer.<sup>2</sup> Since an eclipse of the sun portends some awful and mysterious event, the natives of Ceylon observe a fast on that day.<sup>3</sup> The Todas fire off guns and send up rockets to frighten away the snake that is trying to eat the hare in the moon, and accompany these demonstrations with shouts. They observe a fast also.<sup>4</sup> Shinto religion ordained that, at the time of an eclipse, certain jewels, regarded as amulets, should be suspended from the highest branches of the sacred *cleyera*, their brilliance being suggestive of the light of the sun which it was desired to restore.<sup>5</sup> The lighting of fires, doubtless for the same reason, will dispel an eclipse, and so will the crowing of cocks, as they are the usual heralds of the sun's return. The penultimate *sūrah* of the Qur'ān contains a spell designed to ward off the evil influences that normally accompany an eclipse.

Pierre Bayle argues in some detail that comets and eclipses do not presage ill. He refutes the doctrine of the ancients and that of his contemporaries, by showing that no more misfortunes came after the appearance of certain comets of his day (17th cent.) than before them.<sup>6</sup>

On the west coast of Africa an eclipse of the moon is attributed to the shadow of the sun, which is constantly in pursuit. The natives throng the streets, shrieking and shouting, 'Leave her! Be off! Go away!' But Junod<sup>7</sup> declares that the Thonga are not much impressed with eclipses, being more struck with wonder at the supernatural knowledge of the white people than with fear of the phenomenon itself.

For the Maori an eclipse of the moon presages the fall of the enemy's fortress.<sup>8</sup> The Tahitians it filled with dismay. They supposed it under the influence of some evil spirit which was about to destroy it. They accordingly repaired to the temple and offered prayers for the release of the moon. Some said that the sun or moon, as the case might be, was swallowed by a god whom, through neglect, the celestial body had offended. Liberal presents were offered to induce the god to abate his anger and eject the luminaries of day and night from his stomach. The Tonga Islanders are content to explain the eclipse of the moon as due to a thick cloud passing over it.<sup>10</sup> The N. Queensland natives attribute an eclipse to the anger of spirits;<sup>11</sup> and the Sandwich Islander says that the moon is bitten, pinched, or swallowed.<sup>12</sup>

The Bellacoola believe that during an eclipse the moon paints her face black. At this time the moon performs one of the most sacred ceremonies of the *Isusuit*, which are thought to be very dangerous to the performers. The black paint

with which her face is covered is supposed to be a protection against these dangers. Aialilaaya, the guardian of the moon, restores her to her full size, and cleans her face after an eclipse.<sup>1</sup> The Dakota discharge their rifles in the air to drive away the demon or evil spirit that is causing the eclipse.<sup>2</sup> The Eskimos of the Lower Yukon believe that a subtle essence or unclear influence descends to the earth during an eclipse. If any of it should be caught in utensils, it would produce sickness. To avert this, at the commencement of an eclipse every woman turns all her pots, wooden buckets, and dishes upside down.<sup>3</sup> The Navahos say that an eclipse is caused by the death of the orb, which is revived by the immortal bearers of the sun and moon. During an eclipse of the moon the family is awakened to await its recovery. Similarly, a journey is interrupted and work ceases during an eclipse of the sun. Songs referring to the *hozhoji*, or rite of blessing, are chanted by any one knowing them; otherwise the passing of an eclipse is awaited in silence. It is not considered auspicious to have a ceremony in progress during an eclipse of the sun or moon, and a ceremony is often deferred on this account. The rising generation, however, pays little or no attention to this custom.<sup>4</sup> The Tlingit say that the sun and moon are hiding their faces during eclipse, and they blow their breath towards them in order to blow away the sickness which the eclipse is bringing.<sup>5</sup>

4. Hail.—Hail was formed by the freezing of an entire cloud (Posidonius). At Cleonæ, according to Seneca,<sup>6</sup> were hail-guards appointed by the State to notify the people of the approach of hail. Upon such notification the people offered sacrifices, some a chicken, some a lamb. If these were not to be had, they pricked the finger with a well-sharpened stile and made atonement with their own blood.

Aristotle considered hail and snow the same in formation, differing only in size and shape.<sup>7</sup> For Pliny it was merely frozen rain, probably caused by the winds; but the star Arcturus scarcely ever rises without accompanying storms of hail.<sup>8</sup> Lucretius leans towards a similar interpretation, but his views of its formation are not clearly expressed.<sup>9</sup> Hail is the result of frozen rain-drops, said Bede;<sup>10</sup> but the *Lex Visigothorum*, the earliest Teutonic code, provides a penalty for those who, by incantations, bring hail-storms upon the fields and vineyards.<sup>11</sup>

Hail is often personified in N. American mythology, but the phenomenon is seldom regarded as of any special significance. Among the Nandi no work was permitted during the twenty-four hours following a hail-storm.<sup>12</sup> The Kafirs permitted no field work on the day following a hail-storm, for this would bring down more hail.<sup>13</sup>

5. Lightning and thunder.—Thunder, especially on a cloudless day, was the great omen of Zeus.

<sup>1</sup> H. Zimmer, *Altindisches Leben*, Berlin, 1879, p. 361.  
<sup>2</sup> E. H. Parker, *John Chinaman*, London, 1901, p. 346; Lady Susan Townley, *My Chinese Note Book*, do. 1904, p. 284 f.  
<sup>3</sup> M. E. Stewart, *Everyday Life on a Ceylon Cocoa Estate*, London, n.d., p. 39.  
<sup>4</sup> Rivers, p. 593.  
<sup>5</sup> *ERE* viii. 297 f.; *Kojiki*, tr. B. H. Chamberlain<sup>2</sup>, Tokyo, 1906, p. 64.  
<sup>6</sup> *Pensées diverses, à l'occasion de la comète de 1680*, Rotterdam, 1682.  
<sup>7</sup> A. B. Ellis, *The Eve-speaking Peoples*, London, 1890, p. 65 f.; A. Le Hérissé, *L'ancien Royaume du Dahomey*, Paris, 1911, p. 258.  
<sup>8</sup> ii. 282.  
<sup>9</sup> E. Tregear, *The Maori Race*, London, 1905, p. 336.  
<sup>10</sup> W. Mariner, *Account of the Natives of the Tonga Islands*, ed. J. Martin, Edinburgh, 1827, p. 342; W. Ellis, *Polynesian Researches*, London, 1832-36, i. 331.  
<sup>11</sup> A. C. Bicknell, *Travel and Adventures in N. Queensland*, London, 1896, p. 102 f.  
<sup>12</sup> W. Ellis, iii. 171.  
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<sup>1</sup> F. Boas, *The Myth. of the Bella Coola Indians* (= *Amer. Mus. Nat. Hist.* ii.), New York, 1898, p. 31. *Jesup N. Pacif. Publ.* i.  
<sup>2</sup> D. C. Poole, *Among the Sioux of Dakota*, New York, 1881, p. 91.  
<sup>3</sup> Nelson, *18 RBEW*, p. 430 f.; for Labrador Eskimos see Hawkes, p. 166.  
<sup>4</sup> The Franciscan Fathers, *An Ethnologic Dictionary of the Navaho Language*, Saint-Michaels, Arizona, 1910, p. 41.  
<sup>5</sup> *26 RBEW*, p. 452 f., *29 RBEW* [1916], p. 46, *30 RBEW*, p. 254 f. For tabus imposed during eclipses see Hutton Webster, *Rest Days*, New York, 1916, pp. 42, 50 f., 99, 134 f., 152 f., 259. Greek, Roman, and Christian conceptions are described by Andrew D. White, *A Hist. of the Warfare of Science with Theology in Christendom*, New York, 1910, i. 172 f.; and by Lecky, i. 67; see also J. Brand, *Observations on the Popular Antiquities of Great Britain*, ed. London, 1908, iii. 152.  
<sup>6</sup> *Quæst. Nat.* iv. 61. <sup>7</sup> *Meteorology*, i. 11.  
<sup>8</sup> *HN* ii. 39, 61. <sup>9</sup> *De Rer. Nat.* vi. 107, 157 ff.  
<sup>10</sup> *De. Nat. Rer.* xxxiv. <sup>11</sup> *Bk. vi. tit. 2, 4.*  
<sup>12</sup> A. C. Hollis, *The Nandi*, Oxford, 1908, pp. 17, 20, 100.  
<sup>13</sup> Ratzel, i. 56.

If heard on the right, it was favourable, and therefore unfavourable to the foe, who would hear it on the left. The thunderbolt was cast by Zeus.

'All night Zeus the counsellor meditated evil against them, thundering terribly. And pale fear seized them and they poured wine from their cups upon the ground, nor did any one dare to drink before he had poured a libation to the exalted son of Kronos.'<sup>1</sup>

The Pythagoreans believed that lightning was intended to terrify the damned in Tartarus. The Persians considered it a missile of divine wrath.

Said Artabanus, the adviser of Xerxes, 'Thou seest how the Deity strikes with thunderbolt those beasts that tower above their fellows, but the little ones worry him not; and thou seest also how his missiles always smite the largest buildings and trees of such kind; for God loves to truncate all those things that rise too high. Thus, too, a large army may be ruined by a small one, when God to his jealousy hurls a panic or a thunderbolt, through which they are shockingly destroyed; for God permits none but himself to entertain grand ideas.'<sup>2</sup>

For the Romans thunder predicted the good or evil fortune attendant upon an undertaking, and might itself be compelled or invoked. According to an Etrurian legend, thunder was invoked when the territory of Volsinium was laid waste by the monster Volta. To perform the ceremonies improperly was to court death from the lightning—a punishment visited upon Tullus Hostilius for such shortcomings. Thunder on the left was propitious, for the not very enlightening reason that the east is on the side of the heavens. It is very propitious if the thunder proceeds from the north to the east and then returns to the north. The remaining quarters of the heavens are neither so propitious nor so much to be dreaded. When Marcellus was about to enter upon the duties of consul, it thundered. The augurs were summoned and declared the election invalid, whereupon the fathers spread abroad the report that the gods were displeased because of the election of two plebeians as consuls.<sup>3</sup> Seneca finds marvellous effects in lightning, which leave no doubt that a subtle divine power is inherent in it. But he discountenances the prevailing view that lightning has the sovereign power of destroying the force of other portents, and also the view of Cæcina that, when something is simmering in one's mind, the lightning-stroke either urges it or deters from it. The truth is, if one has a design, then the lightning that occurs counsels; but, if one has no such design, it warns. Nor does he agree that the bolt which occurs first after entrance on an inheritance, or when a city or an individual has entered upon a new phase of existence, embraces in its prognostication the series of events through the whole subsequent life. Sometimes it portends nothing, or at least nothing that we can discover—e.g., if it strike in the sea or in the desert.<sup>4</sup> The Stoic Attalus, according to Seneca,<sup>5</sup> recognized a class of lightning portending nothing that concerns us, and a class intimating what does concern us. Of the significant lightning there are several varieties—a favourable, an unfavourable, and a neutral. The unfavourable portents may be (a) unavoidable, (b) avoidable, (c) such as may be mitigated, or (d) such as may be delayed. If benefits be foretold, they may be (a) abiding or (b) transient.

In violent storms at sea stars seem to settle on the sails. This is accepted as aid from Castor and Pollux. It is, says Seneca,<sup>6</sup> really a sign that the storm is breaking and the wind subsiding; otherwise the stars would flit about without settling. When Glyppus was on the voyage to Syracuse, a star appeared resting on the very tip of his lance. At other times stars rested on the points of the Roman spears.<sup>7</sup>

<sup>1</sup> *Iliad*, vii. 478–481.

<sup>2</sup> Herod., vii. 10. 5; see *HN* ii. 53, xviii. 5; Cicero, *de Divin.* ii. 39; Suetonius, *Caligula*, ii.; *Cod. Theod.* lib. ix. tit. xvi. 1. 3; Eusebius, *HE* v. 5.

<sup>3</sup> Livy, xliii. 31.

<sup>4</sup> *Quæst. Nat. li.* 32–34, 39–49.

<sup>5</sup> *Id.* ii. 50–53.

<sup>6</sup> *Id.*

The Mission Indians of California personify ball-lightning, which they generally regard as possessing malign power.

In the belief of the Saxons thunder on Sunday of a certain year betokens great bloodshed in some nation; on Monday, that a royal child shall be put to death; on Tuesday, failure of crops; on Wednesday, the death of the field labourers; on Thursday, the death of the women; on Friday, the death of sea animals; on Saturday, the death of judges and bed-fellows.<sup>1</sup>

The thunderbolt, according to mediæval belief, was of diabolical origin and eccentric in its workings. It would strike the sword in its sheath, gold in the purse, the foot in the shoe, leaving the respective coverings unharmed; it would consume a human being internally and leave the skin unscathed; it would destroy nets in the water, but not on land. This is in keeping with the belief that the thunderbolts with which the leaders of the Iapygians were stricken down were for a long time afterwards visible.<sup>2</sup>

The belief in thunder-stones, usually the stone implements of previous and forgotten peoples, is almost world-wide.<sup>3</sup> Bushman philosophy declares that it is the rain that lightens. The Bakongo say that thunder is the voice of a great fetish and the lightning the fetish itself.<sup>4</sup>

On the north-west Pacific coast of N. America the thunder-bird, which is associated with the thunder, plays an important part in mythology, in art, and in initiation ceremonies.

The Tlingit say that 'the thunder bird causes thunder by flapping its wings or by moving even a single quill. When it winks, lightning flashes. Upon its back is a large lake, which accounts for the great quantity of rain falling during a thunder-shower. . . . The thunder bird keeps on thundering and the sky continues cloudy until the bird catches a whale.'<sup>5</sup>

The Tewa say that 'lightning is produced by 'ōk'wawa, who throw it from the clouds'<sup>6</sup>—a view prevailing throughout the Plains area, as also in Guiana.<sup>7</sup> The Mewan of S. California say that thunder is caused by two personages who entered the heavens in the form of birds. Another account attributes its origin to Mother Deer and Coyoteman, who made thunder by shaking the dry skin of the bear, while lightning was made from the eyes of boy fawns. To the northern Mewuk thunder is a prototype of the valley bluejay living down below to the west, in the San Joaquin valley, where the clouds are. The rumblings that come from him when he is angry are called thunder by human beings.<sup>8</sup> The Takelma caused thunder to cease rumbling by pinching dogs until they barked. Probably the dog's bark was supposed to frighten away the racoon-like animal whose drumming was the source of the thunder.<sup>9</sup> The Mandans attribute thunder to the flapping of the wings of a huge bird. When the bird flies softly, as is usually the case, it is not heard; but, when it flaps its wings violently, it occasions a roaring noise. It has two toes on each foot, one pointing ahead, the other behind. It dwells on the mountains, and builds nests there as large as one of the forts. It preys upon deer and other large animals, the horns of which are heaped up around the nest. The Hidatsa, similarly, attribute thunder to the flapping of the wings of a large bird which causes rain,

<sup>1</sup> T. O. Cockayne, *Leechdoms, Wortcunning and Starcraft* (Rolls Ser. xxxv.), London, 1864–68, iii. 169.

<sup>2</sup> Athenæus, xii. 24.

<sup>3</sup> See esp. White, i. 266 ff., 329 ff.; Brand, iii. 316 f.; John Evans, *Ancient Stone Implements of Great Britain and Ireland* 3, London, 1897; W. Y. E. Wentz, *The Fairy-Faith in Celtic Countries*, do. 1911.

<sup>4</sup> Weeks, p. 287; Bleek, pp. 395–397; Ratzel, i. 56.

<sup>5</sup> 26 *RBEW*, p. 454.

<sup>6</sup> 29 *RBEW*, p. 59.

<sup>7</sup> 30 *RBEW*, p. 269 f.

<sup>8</sup> C. H. Merriam, *Dawn of the World*, Cleveland, Ohio, 1910, pp. 178, 199, 223.

<sup>9</sup> E. Sapir, *Takelma Texts* (Univ. Penn. Anthropol. Pub.), Philadelphia, 1910, p. 95.

the glance of its eye when seeking prey giving rise to the lightning.<sup>1</sup>

The Australian native alleges that thunder causes tortoises to come out of the water and lay their eggs.<sup>2</sup>

**6. Meteors, meteoric stones, and comets.**—Meteors were generally portentous among the Greeks and Romans, and meteoric stones were venerated by them. In the Gymnasium at Abydos was a meteoric stone which Anaxagoras was said to have predicted would fall in the middle of the earth. Another was at Cassandria, formerly Potidæa, 'which from this circumstance was built in this place.'<sup>3</sup> Pliny reports seeing one which had been brought from the fields only a short time before, in the country of the Vocontii (modern Dauphine). He regards meteors as stars which are visible only when falling.<sup>4</sup> Alexander, in Lemaire,<sup>5</sup> gives the following definition:

'Meteora ista, super cervices nostras transeuntia, diversa que a stellis labentibus, modo aerolithis ascribenda sunt, modo vaporibus incensis aut electrica vi prognata videntur, et quamvis frequentissime recurrant, explicatione adhuc incerta indigent.'

The Aleuts and the Eskimos use meteoric stones as amulets, and the Dakota consider them imbued with mystic power. In Pechili and Manchuria they are worshipped because they come from heaven. In some parts of China they are supposed to originate from thunderbolts, and the fall of one is an evil omen.<sup>6</sup> In Japan meteorites were given over to the priest and were kept in the temple. They were offered annually to Shoknjo on her festival, the seventh day of the seventh month. They were said to have fallen from the shores of the Silver River, Heavenly River, or Milky Way, after being used by the goddess as weights to steady her loom.<sup>7</sup>

It is not stars but fire that falls from heaven, declares Bede:

'It springeth off the heavenly bodies as sparks do from fire. In fact there are as many stars still in heaven as there were at the beginning when God created them.'<sup>8</sup>

The Chaldeans explained comets as special thunderbolts, flaming torches hurled by the thunder-gods. The Greeks held, among other views, that they were rockets formed of particles thrown off by the earth and set on fire in the higher regions of the sublunary world. Here they were consumed, and afterwards fell back to earth.<sup>9</sup> Aristotle held the much more advanced view that they were the result of a certain juxtaposition of the stars.<sup>10</sup> Pliny adopts in large part the classification of comets inherited from the Greeks:

There are the Crinitæ, 'as if shaggy with bloody locks, and surrounded with bristles like hair; the Pogonia, having a mane hanging down from their lower part, suggestive of a beard,' etc. 'There is also a white comet, with silver hair, so brilliant that it can scarcely be looked at, exhibiting, as it were, the aspect of the Deity in a human form. There are also some that are shaggy, having the appearance of a fleece, surrounded by a kind of crown.'<sup>11</sup>

The rising of a comet does not convey a threat of wind and rain in the immediate future, as Aristotle says, but casts suspicion over the whole year. Hence it is plain that the comet has not derived prognostications from its immediate surroundings to reveal them for the immediate future, but has them stored up and buried deep within by the laws of the universe. The comet which appeared in the consulship of Paternus and Vopiscus fulfilled the anticipations of this kind

entertained by Aristotle, and, for that matter, by Theophrastus; for there were everywhere prolonged storms, while in Achaia and Macedonia cities were overturned by earthquakes.<sup>1</sup> A meteor as big as the moon appeared when Paulus was waging war against Perseus. A similar portent appeared about the time of the death of Augustus, when Sejanus was executed, and before the death of Germanicus.<sup>2</sup> For the Roman sailor many shooting stars were the sign of a storm.

Shooting stars are the embers thrown down from the fires kept by spirits of the dead.<sup>3</sup> They are usually unpropitious. The Spartan ephors might depose a king at the end of eight years, if, during their vigil on a clear and moonless night, they saw a meteor or shooting star. Frequently they portend some important event:

'When beggars die, there are no comets seen;  
The heavens themselves blaze forth the death of princes'  
(Shakespeare, *Julius Cæsar*, act ii. sc. ii.).<sup>4</sup>

**7. The Milky Way.**—The Jews thought of the Milky Way as a river flowing through the heavens, proceeding from the throne of God—an idea derived in its general conception from Babylonia.<sup>5</sup> The Japanese say that the River of Heaven or the Milky Way is a vast river in the sky, whose overflow is represented by the Yangtse. Across this river is neither bridge nor ferry, but once a year, on the seventh day of the seventh month, Kasapagi, an immense jay, comes to it and spreads its wings across. Over this bridge meet Kengin, the neatherd, who presides over arms, and Shokujo, the weaver, who presides over weaving and other feminine arts.<sup>6</sup>

A tradition current among the Micmacs states that the Milky Way was formed when the Virgin Mary, returning across the heavens with a pail of milk, stumbled and fell. The Tlingit say that the Milky Way was made by the culture hero Lq'ayak when journeying across the heavens.<sup>7</sup> The Tewa call it the backbone of the Universe Man.<sup>8</sup>

**8. Perihelion.**—The perihelion was explained by Aristotle as due to refraction from the sun,<sup>9</sup> and by Seneca as the reflexion of the sun in the heavens.<sup>10</sup> To the Romans it portended rain, and often some considerable misfortune. The Tlingit say that, if a mock sun goes down with the sun, good weather is portended; if it goes away before sunset, bad weather.<sup>11</sup>

Bishop Latimer in 1552 speaks of rings about the sun as signs of the approaching end of the world.<sup>12</sup>

**9. Rainbow.**—The Catawba (as also the Tlingit) call the rainbow the 'dead people's road.'<sup>13</sup> The Teton Dakota will not point at the rainbow with the index-finger, though they can point at it with the lips or elbow. Should one forget and point at it with the fore-finger, the bystanders laugh at him, saying, 'By-and-by, O friend, when your finger becomes large and round, let us have it for a ball bat.'<sup>14</sup> The Hopi and the Thompson Indians of British Columbia have a similar tabu. The Hidatsa call the rainbow 'the cap of the water' or 'the cap of the rain,' and attribute its formation to the claws of a red bird. The Mandans say that it is a spirit accompanying the sun.

The 'great snake of the underneath' is the rainbow-god of the Yoruba. It comes up at times to

<sup>1</sup> Seneca, *Quæst. Nat.* vii. 3, 11, 1, 27, 2. <sup>2</sup> *Ib.* vii. 15.

<sup>3</sup> Swanton, *26 RBEW*, p. 452 (Tlingit).

<sup>4</sup> For an excellent account of the mediæval and later Christian view of meteors see White, i. 171 ff.; also Lecky, i. 367-369; Brand, iii. 241.

<sup>5</sup> Clemens, pp. 102, 167.

<sup>6</sup> *TASJ* x. 199.

<sup>7</sup> *26 RBEW*, p. 452.

<sup>8</sup> *29 RBEW*, p. 41.

<sup>9</sup> *Meteorology*, iii. 2, 3.

<sup>10</sup> *Quæst. Nat.* i. 11-13.

<sup>11</sup> *26 RBEW*, p. 453.

<sup>12</sup> *Sermons*, Second Sunday in Advent, 1552 (*Sermons and Remains*, Cambridge, 1846).

<sup>13</sup> *JAF* xxvi. [1913] 830.

<sup>14</sup> *11 RBEW* [1894], p. 467.

<sup>1</sup> A. P. Maximilian, *Travels in the Interior of N. America*, Eng. tr., London, 1843, p. 399.

<sup>2</sup> J. Dawson, *Australian Aborigines*, Melbourne, 1881, p. 96.

<sup>3</sup> *HN* ii. 59.

<sup>4</sup> *Ib.* ii. 25.

<sup>5</sup> *Poetæ Latini minores*, Paris, 1824-26, i. 302.

<sup>6</sup> E. H. Parker, *Ancient China Simplified*, London, 1908, p. 269; Thomas Wright, *Travels of Marco Polo*, do. 1854, p. 304; C. J. L. de Guignes, *Voyage à Pékin*, Paris, 1809, i. 195-250.

<sup>7</sup> *TASJ* x. [1882] 199 f.

<sup>8</sup> Cockayne, iii. 271.

<sup>9</sup> Bouché-Leclercq, p. 357 ff.

<sup>10</sup> *Meteorology*, i. 4.

<sup>11</sup> *HN* ii. 22.



drink water from the sky. A variety of the python is the messenger of this god.<sup>1</sup>

Pliny gives a purely naturalistic explanation of the rainbow, denying that it is either wonderful or ominous, yet he admits that it means either war or a fierce winter which will make an end of men's work and injure the sheep.<sup>2</sup> Seneca tells us that a rainbow in the south portends a heavy fall of rain; one in the west, a dew or light rain.<sup>3</sup>

To the Arawaks the rainbow heralds the approach of white people from that quarter in which it appears. When the Caribs see it at sea, they accept it as a good omen, but, if it appears while they are on land, they hide in their homes, considering it a strange and masterless spirit which is seeking to kill somebody.<sup>4</sup>

**10. Volcanic activity.**—For the Romans volcanic activity presaged dire calamities.<sup>5</sup> Avernus, in Italy, was commonly thought the entrance into the infernal regions.

The old crater in Ceylon contained salt water which was considered the residue of the tears of Adam and Eve, who retreated here after their expulsion from paradise and for one hundred years copiously bewailed their sin.<sup>6</sup> Gregory the Great<sup>7</sup> saw the soul of Theodorice going down a volcano on the island of Lipari.

**11. Waterspout.**—The waterspout took the form of a great animal and was much dreaded by the Roman sailor.<sup>8</sup>

**12. Will o' the wisp.**—The Yorkshireman can elude a will o' the wisp by putting a steel knife into the ground, handle upwards. It will run round this until the knife is consumed, thus providing the pursued an opportunity to escape. The mysterious power of attraction which it possesses can be escaped by twining one's apron. In 16th cent. England many superstitions were associated with this phenomenon.<sup>9</sup>

Among the Micmac, as also among the Dakota, the word for will o' the wisp means also ghost. Both tribes believe that it will pursue one. The Dakota have a medicine which will protect the wearer from such pursuit. The Micmac elude it by putting a pin point upwards in their tracks; this the *skedégamutch* will not go past.<sup>10</sup> In Maryland the superstitious Whites believe that it is the evil eye pursuing them.<sup>11</sup>

#### V. PHYSIOLOGICAL AND PSYCHIC PHENOMENA.

—1. **Albinos.**—The albino person or animal is often the object of religious reverence. The sudden and mysterious appearance of the white buffalo was the 'sign' for which the Fox Indians waited.<sup>12</sup> For many of the American tribes the white buffalo or the white deer portended some extraordinary fortune. The skin of the white buffalo cow was an eminent fetish with the Mandan and Hidatsa, worn on rare occasions and sometimes used as a sacrifice. The Crow have a superstitious fear of the white buffalo cow. When they meet one, they address the sun with these words: 'I will give her to you.' They then attempt to kill the animal, but leave the flesh untouched, saying to the sun, 'Take her; she is yours.' They never make use of the hide of such a cow.<sup>13</sup>

<sup>1</sup> Ellis, *The Yoruba-speaking Peoples*, p. 81.

<sup>2</sup> *HN* ii. 60.

<sup>3</sup> *Quest. Nat.* i. 3-10; cf. White, i. 330, 388.

<sup>4</sup> *50 RBW*, p. 268.

<sup>5</sup> *HN* ii. 110, quoting Theopompus; Verg. *Æn.* vi. 126 ff., 273 ff.

<sup>6</sup> Jürgen Andersen, *Reisebeschreibung*, Amsterdam, 1669, ii. 132.

<sup>7</sup> *Dial.* iv. 30. <sup>8</sup> *HN* ii. 60; Lucretius, vi. 425.

<sup>9</sup> See F. E. Hulme, *Myth-Land*, London, 1888, p. 122 f.

<sup>10</sup> *Coll. Minn. Hist. Soc.* ii. 153.

<sup>11</sup> Cf. Brand, pp. 305-411.

<sup>12</sup> M. A. Owen, *Folk-Lore of the Musquakie Indians*, London, 1904, p. 67.

<sup>13</sup> Maximilian, p. 310.

Throughout the Lower Congo an albino or the hair of an albino person is necessary to supply the needed magical power for the Ndembo society.<sup>1</sup> On the West Coast the albino is regarded as a sacred person, and is *ipso facto* a candidate for the priesthood.<sup>2</sup>

The white dog was sacred among the Iroquois and was sacrificed. In Siam the white elephant or white monkey was sacred and might not be killed—an inconvenient restriction to those who 'had a white elephant on their hands.' A white horse, a white pig, and a white cock were among the offerings at harvest-time prescribed by Shintō ritual. By virtue of such gifts the diviners obtained from the god of harvest the secret of a magical process which enabled them to save the imperilled crop. The white horse also served to establish the ruling house:

'As this white horse plants firmly his fore-hoofs and his hind-hoofs, so will the pillars of the Great Palace be set firmly on the upper rocks and frozen firmly on the lower rocks; the pricking up of his ears is a sign that your Majesty will, with ears ever more erect, rule the Under Heaven.'<sup>3</sup>

In the book of *Enoch*<sup>4</sup> the Messiah, at the conclusion of the world drama, appears under the figure of a white bull, and in this guise secures the respect and fear of all the heathen, who, thanks to this apparition, are converted to righteousness. He is feared by all the beasts. When all the other animals have become white, He changes into a buffalo with black horns.<sup>5</sup>

Xerxes sacrificed white horses and young men that the gods might give him victory.

**2. Birth.**—(a) *Supernatural birth.*—To assure the divine nature of the ruler, and as a logical result of his alleged divinity, his origin was attributed to some other than natural birth.

'It seems to me that a hero totally unlike any other human being could not have been born without the agency of the deity,' said the biographer Arrian, when discussing the parentage of Alexander the Great.<sup>6</sup> 'He to whom the gods themselves reveal the future, who impose their will even on kings and peoples, cannot be fashioned by the same womb which bore us ignorant men,' said the Augustan writer Arellius Fuscus in his discussion of astrologers.<sup>7</sup>

In N. America the concept of a supernatural origin is frequently held with regard to the culture hero or heroine, who often originates from a blood-clot or from menstrual blood.<sup>8</sup>

(b) *Twins.*—The Navaho accept twins as a divine gift, though the advent of twin colts is viewed as an evil omen and both mare and colts are killed. Many primitive peoples, however, consider twins uncanny and may kill one or both of them. Most of them regard triplets unfavourably, though in some instances they are welcomed.

**3. Dreams.**—The prophetic nature of dreams and their use as auguries are familiar themes to the student of Greek and Roman culture.<sup>9</sup> Prometheus, says Æschylus,<sup>10</sup> was the first to teach men what sort of dreams were destined to prove realities. In obedience to dreams the great emperor Augustus went through the streets of Rome begging.<sup>11</sup> Incubation was practised there as in the temples of China at the present time.<sup>12</sup> Pliny doubted the mind's knowledge of the future, when in sleep,

<sup>1</sup> Weeks, p. 169.

<sup>2</sup> Cf. Wallis, *AJRPE* vi. [1913] 263.

<sup>3</sup> *Kojiki*, ed. Chamberlain<sup>2</sup>, pp. 54, 58, 113.

<sup>4</sup> *xc.* 37 ff.

<sup>5</sup> R. H. Charles, *The Book of Enoch*, London, 1893, p. 258.

<sup>6</sup> *Anab.* iii. 3, iv. 9, vii. 8.

<sup>7</sup> *Ap. Seneca*, *Suas.* iv. 1.

<sup>8</sup> Cf. E. S. Hartland, *Primitive Paternity*, London, 1910, i. 110.

<sup>9</sup> Xenophon, *Anabasis*, iii. 1; *Iliad*, i. 62 f., ii. 8 ff.; *Odyssey*, xiv. 541, 562; A. G. Keller, *Homeric Society*, London, 1913, p. 160 f.

<sup>10</sup> *Prom. Vinc.*, 442 ff.

<sup>11</sup> Suetonius, *Augustus*, xci.; see, further, Cicero, *de Divin.* i.; Val. Max. i., vii.; Pliny the Younger, *Ep.* i. 18. For Persian interpretation of dreams see Herodotus' description of the dream of Xerxes (vii. 12 ff.).

<sup>12</sup> J. L. Nevius, *China and the Chinese*, New York, 1869, p. 192 f.; Mary Hamilton, *Incubation*, St. Andrews and London, 1906.

but in spite of his amazing credulity he was an advanced sceptic.<sup>1</sup>

Muhammad, according to tradition, said:

'A good dream is of God's favor, and a bad dream is of the devil's; therefore, when any of you dream a dream which is such as he is pleased with, then he must not tell it to any but a beloved friend; and when he dreams a bad dream, then let him seek protection from God both from its evil and from the wickedness of Satan; and let him spit three times over his left shoulder, and not mention the dream to any one; then, verily, no evil shall come nigh him.' The truest dream is the one which you have about daybreak.<sup>2</sup>

Specific and conventional interpretations are often given to dreams.

In Persia 'seeing bees in a dream indicates riches. To dream of eating grapes presages sorrow and flowing tears. To dream of buffaloes fighting means that the angels will come for the soul of some member of the family.'<sup>3</sup>

In Northumberland to dream of a hare means that you have an enemy; if one crosses your path, it is an omen of ill-luck. To see many eagles is to be warned of plots and intended assaults. If it be bees carrying honey, you will earn money from wealthy people. If the bees sting you, your mind will be tormented by foreigners. If bees fly into the house, the house will be destroyed. To dream of many fowls together is a sign of jealousy and chiding.<sup>4</sup> Any dream on the first night of the moon's age is a good omen, while the second and third nights are neutral. The following two nights betoken good. The dream of the sixth night should not be forgotten. That of the seventh is sure to be fulfilled. Whatever is dreamed on the eighth and ninth nights will become public. If it is unpleasant, turn the head towards the east and pray for mercy. Similarly, birth has its fortune embodied in the days of the lunar calendar, and each month, from the first to the thirteenth, has its particular portent.<sup>5</sup>

Dreams play an important part in the lives of most primitive peoples, and usually betoken something in harmony with their content. Among the Dakota to dream of the moon is unlucky. It is lucky to dream of hawks, but unlucky to dream of bears, for the latter are slow and easily wounded. A dream about snakes will be the result of killing one, and no good comes from snakes, they say (the Menominee have the same beliefs). As among all the Plains tribes, in the dance associations of the Eastern Dakota dreams play a prominent part. In the Buffalo society of the Santee only those who had had visions of the buffalo, or the sons of such, were entitled to membership.

<sup>1</sup> One man might dream that he was a buffalo and had been shot with an arrow so that he could barely get home. The arrow continued to whirl round in his body. He dreamt that the only way to recover was to go into a sweat-lodge. First he asked for one of four different kinds of earth to mix with water, drank the mixture inside a sweat-lodge, and then recovered. Such a man painted himself vermilion to represent the trickling down of blood. Another man dreamt of being shot with a gun. Such a one would act out his dream during a Buffalo dance. A third man dreamt that a bullet pierced his eye and came out at the back of his head. He announced his dream, and shortly afterwards was actually shot in that way. Still another man announced a dream to the effect that he was shot through his temples, and this also came true. While dancing, dreamers would call on outsiders to bear witness to the truth of their statements about such experiences. Once a *heyoka* (a Clown) challenged a dreamer's account, saying that no man could recover from a wound of the kind described. Straightway the dreamer offered to be shot by the Clown, who sent a bullet through him. The wounded man staggered off, went to a sweat-lodge, and actually recovered within a few days.<sup>6</sup>

Among the Arapaho dreams were revelations. To the Omaha the moon would appear, having in one hand a burden strap, in the other a bow and arrows, and the man would be bidden to make a

choice. If he reached for the bow, the moon would cross its hands and attempt to force the strap on him. If he should wake before taking the strap, or if he should succeed in capturing the bow, he would succeed in escaping the penalty attached to the dream. If he failed and the strap was taken, he would become like a woman, follow her vocations, and adopt her dress. Instances are reported in which the unfortunate dreamer, unable to ward off the evil influence, has resorted to suicide as the only means of escape. To the Menominee a dream about the moon brings long life, but a life that will end in misery. Such people are strong when the moon is full, weak and sickly when it is on the wane.<sup>1</sup> To the Huron the dream gives voice to the soul's desires.<sup>2</sup> Among the Hidatsa only those dreams that follow prayer, sacrifice, or fasting are portentous;<sup>3</sup> while for the Mandan dreams are always prophetic or ominous. A Mandan dreamt of fire-arms, and soon afterward the Whites arrived with them. They dreamt of horses in similar manner before they obtained any. For the fasting youth to dream of a piece of cherry-wood, or of any animal, is a good omen. The Thonga profess to be disgusted when any dream is fulfilled,<sup>4</sup> but this must depend somewhat on the nature of the fulfilment. The Kafir medicine-man acquires his powers through dreams, and the expectant mother learns by this medium the sex of her unborn child.<sup>5</sup> Similar predictions were made from dreams by the Maoris, by whom much attention was paid to the dreams of the war-chief or of the principal priest, especially on the night before an engagement. They were guided by the omens of which the dream was an index.<sup>6</sup>

The Japanese recognize a creature by the name of *baku*, whose particular function is the eating of dreams. The male *baku* has the body of a horse, the face of a lion, the trunk and tusks of an elephant, the forelock of a rhinoceros, the tail of a cow, and the feet of a tiger. The picture of the *baku* hung up in the house will secure the protection of the animal. The Chinese character representing its name used to be put in the lacquered wooden pillows of lords and princes. By virtue of this character on the pillow the sleeper was protected from evil dreams. When a man awakes from a nightmare, or from any unlucky dream, he should quickly repeat three times the invocation, 'Devour, O *baku*, devour my evil dream!' The *baku* will then eat the dream and change the misfortune into good fortune and rejoicing.<sup>7</sup> The Vedic texts direct one who has had an evil dream to wipe his face in order to get rid of its malign influence.<sup>8</sup> This is more simple than the Navaho remedy, which may call for a 'renewal' ceremony.

4. Epilepsy.—Many peoples attribute epilepsy to possession by a demon. This was the view held by the Hindus, and in the Vedic texts a ritual ceremony is prescribed for its exorcism. Its uncanny nature has generally been recognized. From the time of Edward the Confessor to that of Queen Anne epilepsy was considered curable by royal touch.<sup>9</sup>

5. Liver.—The liver has long been considered an unusual organ of the human body, and unusual qualities have been attributed to it.<sup>10</sup> In ancient Greece goose liver was used as being efficacious in medical

<sup>1</sup> A. Skinner, *Anth. Papers Amer. Mus. Nat. Hist.* xiii. pt. i. p. 80.

<sup>2</sup> *Jesuit Relations*, xxxix. 17 ff.

<sup>3</sup> Dorsey, p. 516.

<sup>4</sup> Junod, ii. 341.

<sup>5</sup> Kidd, p. 156.

<sup>6</sup> Tregear, pp. 338 f., 208, 40; E. Shortland, *Maori Religion and Mythology*, London, 1882, p. 36.

<sup>7</sup> L. Hearne, *Kottō*, New York, 1910, pp. 245-251.

<sup>8</sup> *ERE* viii. 318a.

<sup>9</sup> See White, ii. 46-49, and authorities there cited.

<sup>10</sup> See Morris Jastrow, 'The Liver as the Seat of the Soul,' in *Studies in the Hist. of Religion*, presented to C. H. Toy, New York, 1912, pp. 143-168.

<sup>1</sup> HN x. 98.

<sup>2</sup> I. Adams, *Persia by a Persian*, London, 1906, p. 450.

<sup>3</sup> *Id.* p. 446.

<sup>4</sup> Cockayne, iii. 169-177, 199-215; see also Mrs. Gutch, *County Folk-lore*, ii. London, 1901, pp. 202-208.

<sup>5</sup> Cockayne, iii. 150-167, 177-197.

<sup>6</sup> R. H. Lowie, in *Anth. Papers Amer. Mus. Nat. Hist.* xi. [1913]; J. O. Dorsey, *11 RBEW*, pp. 479, 500.

treatment;<sup>1</sup> the liver of the lizard would impart peculiar powers to the eater.<sup>2</sup> The Lushais eat the witch's liver in order to destroy the witchcraft,<sup>3</sup> and the Cochinchinese express their deepest hatred of a person by saying, 'I wish I could eat his liver.'<sup>4</sup> In ancient Arabia Hind, the wife of al-Fakih, inspired by similar motives, gnawed the liver of her arch-enemy Hamza,<sup>5</sup> while a modern Arab will eat the liver or heart of a snake in order to acquire an understanding of the language of birds. In N. Morocco the Jbala bride and bridegroom partake at the wedding ceremony of the liver of a sheep, to make them 'dear to one another'; and in Andjra the bridegroom, though not the bride (for no woman may eat of it), partakes of the liver of the bullock.<sup>6</sup> Arabian influence may be reflected in the Apocryphal account of the evil spirit who loved Sarah and was exorcized by flames arising from the heart and liver of a fish which Tobit, by the instruction of the angel, burned on the evening of his wedding.<sup>7</sup>

Similar attribution of unusual powers to the liver of a person or an animal is wide-spread. The Veddas of Ceylon chew the dried liver of a man in order to imbibe his virtue, and the Sinhalese have a tradition to the effect that they formerly followed the same practice.<sup>8</sup> In Erub (Torres Straits) the liver, 'presumably of a deceased male,' was cut up and distributed among the young male members of the family to make them plucky.<sup>9</sup> The Koita of British New Guinea allowed only girls to partake of the liver of the wallaby, the virtues of this animal affording no enhancement to males.<sup>10</sup> In Australia the virtue elsewhere usually attributed to the heart or the liver resided in the fat around the kidneys.<sup>11</sup> The Maoris gave the liver of the *kalawi*-fish to a nursing child as a cure for flatulence. The liver is the seat of the affections, as also among the Greeks; and a piece of the liver of the first man slain must be offered, along with a piece of the heart and the scalp, to the goblin god, Whiro. So acute is the power of the liver that the Maoris call one of their implements for cutting wood the *kotiata*, 'liver cutter.'<sup>12</sup> The Tonga Islanders believe that turtle has a peculiar effect upon the liver and they will not eat it, fearing the enlargement of the liver which indulgence in this food will produce. The liver is the seat of courage, and therefore the largest livers pertain to the largest men. They have found also that in left-handed people it tends to shift to the left side, and in the ambidextrous it is in the median line of the body.<sup>13</sup> The Kayans of Borneo knew that the omen was bad if the under side of the liver of the pig was dark, good if it was pale.<sup>14</sup> So general was haruspication among the Borneans that W. Warde Fowler is convinced that its origin is common with

that derived by the Romans from the Etruscans.<sup>1</sup> But, as the phenomenon is so common to savage culture, any theory of the connexion of the divination rites of the natives of Borneo and those of ancient Rome will have to take account of this fairly wide distribution of similar and related things in the larger world of savagery. The supposed uniqueness of the phenomenon does not exist, and the historical hiatus must be bridged by data that show the probability of actual contact between the two in the past.<sup>2</sup> Geographical proximity as well as early historical contact makes Africa a much more probable land of origin for Etruscan influence, especially since the ancient Arabians entertained such beliefs, and they are common among African tribes. Leo Frobenius<sup>3</sup> has attempted to establish the African origin of Etruscan culture, but the argument remains unconvincing to those who feel the need of historical demonstration.

Several tribes of Central Africa attribute special virtue to the liver—in some cases to the liver of the alligator.<sup>4</sup> It is the seat of the soul, and to eat of it is to enhance one's own spiritual being, though, as often happens, this beneficence is denied to women.<sup>5</sup> Accordingly, the Bakongo drink the blood and eat the liver of those killed in a fight.<sup>6</sup> For similar reasons the Kagoro (of Nigeria) evil-wisher will catch one's soul or take one's liver.<sup>7</sup> The pottery-makers of the Thonga (at least those dwelling near Morakwen) may not eat the liver of any animal. In the ceremonies and superstitions of this region the gall-bladder plays an important part, as does also the liver of the ox. When two parties not within the permitted relationship wish to marry, they must break the tabu by a ceremonial eating of the raw liver of this animal. They must first tear it out with their teeth, for it is tabu to cut it with a knife, and then eat it. 'You have acted with strong *shibindji*,' they say to those who are eating their way to matrimony, 'Eat the liver now!' (*shibindji* means both 'liver' and 'determination,' a history of the interdependence of the two).<sup>8</sup> When an ox is killed by the headman of the village for distribution among the villagers, the liver is given to the 'grandfather' and the old people, 'because it is soft and they have no teeth to gnaw the bones,' but doubtless, also, because it imparts, more than does any other portion, the strength of the animal.<sup>9</sup> The Ovaherero, of Damaraland, attribute their black complexion to the eating by their ancestors of the black liver of an ox killed when the first people emerged from the tree that gave them birth.<sup>10</sup> A Matabeleland native who wished to learn sorcery paid a big price to one of the recognized medicine-men in order to induce him to accompany the candidate to the grave of a recently buried person, unearth the body, cut it open, remove the liver, and, by its help, inculcate the desired instruction.<sup>11</sup> The Bechuana find effective, in their prescription designed to defeat the enemy, the gall of a black bull whose eyelids have been sewed up, the animal then being allowed to wander for three days. If they find little gall in the gall-bladder of an animal, they say that some ancestral spirit has previously sucked it out. A man often cleanses himself with the gall of an ox, and a chief will

<sup>1</sup> Mary Hamilton, p. 52.

<sup>2</sup> W. R. Halliday, *Greek Divination*, London, 1913, pp. 88, 101, 168, 193-204; see DIVINATION (Greek) and (Roman).

<sup>3</sup> J. Shakspeare, *The Lushai Kuki Clans*, London, 1912, p. 109.

<sup>4</sup> G. H. von Langsdorf, *Voyages and Travels*, Eng. tr., London, 1813-14, i. 148.

<sup>5</sup> W. Robertson Smith, *Kinship and Marriage in Early Arabia*, new ed., London, 1903, p. 296.

<sup>6</sup> E. Westermarck, *Marriage Ceremonies in Morocco*, London, 1914, pp. 101, 126.

<sup>7</sup> To 8.

<sup>8</sup> C. G. and B. Z. Seligmann, *The Veddas*, Cambridge, 1911, pp. 128, 190, 207.

<sup>9</sup> Haddon, in *Cambridge Anth. Exped. to Torres Straits Reports*, vi. [1908] 111.

<sup>10</sup> C. G. Seligmann, *The Melanesians of British New Guinea*, Cambridge, 1910, p. 139.

<sup>11</sup> References to this belief will be found in G. C. Wheeler, *The Tribe, and Intertribal Relations in Australia*, London, 1910, p. 160.

<sup>12</sup> A. Hamilton, *The Art Workmanship of the Maori Race*, Dunedin, 1896, p. 186; Tregear, pp. 219, 472, 496, 48.

<sup>13</sup> Mariner's, p. 342 f.

<sup>14</sup> A. Nieuwenhuis, *Quer durch Borneo*, Leyden, 1904-07, pp. 171-182; C. Hose and W. McDougall, *The Pagan Tribes of Borneo*, London, 1912, ii. 61 ff.

<sup>1</sup> JRS ii. [1912] 269 f.

<sup>2</sup> See Wallis, 'Divinations in Borneo and in Ancient Rome,' *The Classical Journal*, ix. no. 6 [1914], 272-274.

<sup>3</sup> *Und Afrika sprach*, Berlin, 1912.

<sup>4</sup> H. H. Johnston, *British Central Africa*, London, 1897, p. 81.

<sup>5</sup> PRSE xiii. [1884-86] 213 f.

<sup>6</sup> Weeks, p. 38.

<sup>7</sup> A. J. N. Tremearne, *The Tailed Head-hunters of Nigeria*, London, 1912, pp. 171 f., 195.

<sup>8</sup> Junod, i. 246, 336, ii. 62, 96.

<sup>9</sup> *Ib.* i. 299.

<sup>10</sup> A. Lang, *Myth, Ritual and Religion*, new ed., London, 1899, i. 171.

<sup>11</sup> JRS i. xxxix. [1909] 533.

drink it to acquire strength to withstand his enemies. During the initiation ceremonies the boys eat a portion of the liver of an ox killed for that purpose, and thereby acquire courage and intelligence. Yet any one who eats a certain tongue-shaped lobe of the liver (the *lobus Spigelii*) will forget the past, and this is given only to the old women, who thus enter into forgetfulness of their sorrows.<sup>1</sup>

The liver—sometimes the heart—is spoken of by the Kafir as the seat of courage, the gall being the fluid that contains its very essence.

'Arbousset declares that the Basuto consider the gall to represent the anguish of death; but it seems problematical whether the natives have any conception of such an abstract thing as the anguish of death. The gall is regarded in most tribes as the seat of courage and boldness. When the natives wish to describe the bravery of a great man they say that he has a large liver. Perseverance, that elemental faculty in human nature, is coupled in the native mind with perspiration; and, as the first place this is seen in on the skin of the forehead, they frequently consider that its seat or "centre" (as physiologists would say) is there. Intelligence or enlightenment is also sometimes considered to reside in the liver; but I fancy the sort of intelligence that is referred to is that which is displayed in battle. . . . The man who is capable of enduring hardness is said to have a hard liver.'<sup>2</sup>

The Chukchis of Siberia, in order to bring sickness upon a murdered man's kindred, eat the liver of the corpse, and the Eskimo practised a similar rite that the dead man's relatives might not possess the courage to avenge his death.<sup>3</sup> Moreover, by eating the liver of the murdered man, they deprive the ghost of the power that he would otherwise have of rushing upon them.<sup>4</sup> A story given by Rink shows the importance attaching to the liver:

'At last there was silence; and during this, one of the two brothers stood forth, and, taking a bit of dried liver (this being exceedingly hard), raised his voice, saying, "I have been told that I have an enemy in Niakunguak." At the same time he tried to crush the piece of liver he held in his hand; but failing to do so, he again put it by. Silence still prevailed, when Niakunguak's son advanced, and, taking up the same bit, crushed it to atoms with his fingers, so that it fell like dust upon the floor. All were utterly amazed, and not a word was spoken.'<sup>5</sup>

Here some special significance seems attached to this crushing of the liver in the manner portrayed. It seems probable that liver was associated with magic power.

'They thus entered, and saw all the brothers stretched out at full length on the ledge, only their feet visible on its outer edge (a sign of wrath). They were treated to some frozen liver in an oblong dish; but when they had got only half through with it, the frozen roof fell in and covered the dish with turf-dust.'<sup>6</sup> 'When she had ended, Habakuk went closer to them, saying, "Well, take the skin of my seal with blubber and all, and the liver besides."<sup>7</sup>

An *angakok* gave the liver of a seal caught by a lucky hunter to one who was unlucky, and the latter acquired the desired luck by slowly chewing and swallowing the flesh. In Greenland the mother giving birth to her first child might not eat the liver of any animal; in Labrador she might partake of a portion of it.<sup>8</sup>

The *chenoo* of Micmac mythology, an ogre, representing, not improbably, Eskimo influence, showed a special liking for the liver of a conquered foe.<sup>9</sup> The Chippewas were long ago admonished by the Crows to leave them the liver of the animal as part of their portion, and this custom is followed to-day.<sup>10</sup> The Siouan tribes of the Plains area attach great importance to the liver of the buffalo and, in some instances, to that of the dog. The Omaha eat the liver of the buffalo raw. It gives

a man a clear voice and imparts courage.<sup>1</sup> Accordingly, the youth who has shot his first buffalo eats the liver with the gall over it as a potent dressing.<sup>2</sup> The Plains Cree warriors also, when they killed a bison, ate its liver raw.<sup>3</sup> The Northern Shoshone imparted additional power, and, in this case, malign power, to the liver by placing rattlesnake heads on hot coals in a hole in the ground. The liver was that of a wild animal and was covered with the gall. The liver absorbed the poison from the fangs and was then carefully preserved in a little buckskin bag carried by the owner.<sup>4</sup>

A society of 'Liver Eaters' is found among the Crow,<sup>5</sup> and members of the Bear clan of the Teton Dakota (Oglala division) sometimes eat the liver of the dog raw. A male must not eat the liver of a female dog, nor a female that of a male dog. Sores will break out on the face of an offender.<sup>6</sup>

The 'Dog-Liver-Eaters' Dance Association' is one peculiar to the Eastern Dakota.

It takes its name from the fact that the raw liver of the dog is eaten by the performers. It is not often performed, and only on some extraordinary occasion. The performers are usually the bravest warriors of the tribe, and those having stomachs strong enough to digest raw food.

When a dog-dance is to be given, the warriors who are to take part in it, and all others who desire to witness it, assemble at some stated time and place. After talking and smoking for a while, the dance commences. A dog, with his legs pinioned, is thrown into the group of dancers, by any one of the spectators. This is dispatched by one of the medicine-men, or jugglers, with a war-club or tomahawk. The side of the animal is then cut open and the liver taken out. This is then cut into strips and hung on a pole about four or five feet in length. The performers then commence dancing around it; smacking their lips and making all sorts of grimaces; showing a great desire to get a taste of the delicious morsel. After performing these antics for a while, some one of them will make a grab at the liver, biting off a piece, and then hopping off, chewing and swallowing it as he goes. His example is followed by each and all the other warriors, until every morsel of the liver is eaten. Should any particle of it fall to the ground, it is collected by the medicine-man in the palm of his hand, and carried it around to the dancers to be eaten and his hands well licked.

After disposing of the first dog, they all sit down in a circle, and chat and amoke a while until another dog is thrown in, when the same ceremonies are repeated, and continued so long as any one is disposed to present them with a dog. They are required to eat the liver, raw and warm, of every dog that is presented to them; and while they are eating it, none but the medicine-men must touch it with their hands. Women do not join in this dance.

The object of this ceremony is, they say, that those who eat the liver of the dog while it is raw and warm, will become possessed of the sagacity and bravery of the dog.<sup>7</sup>

The Ainu have the custom of cutting up the liver of the bear, which is one of their sacred animals, and of eating it raw. If a Pima woman ate liver, her child would be disfigured by birth-marks.<sup>8</sup> The Zuni hunter takes the liver from his captured game, and, while eating it, exclaims, 'Thanks!'<sup>9</sup> The Aztecs practised a well-developed system of haruspication, reading omens from the liver or other organs of the slaughtered animal, and the Araucanians of Chile were given to related practices. They dissected the body of a person of distinction in order to examine the liver. If it was found to be in a healthy state, the death was attributed to natural causes; if inflamed, malign magic had caused the death. The gall is extracted, placed in a magic drum, and, after various incantations, taken out and put over the fire in a carefully covered vessel. If, after sufficient roasting, a stone is found in the bottom of the pot, it is known to have been the cause of death.<sup>10</sup>

<sup>1</sup> A. C. Fletcher and F. La Flesche, *77 RBEW* (1911), p. 832.

<sup>2</sup> *3 RBEW* (1884), p. 291 f.

<sup>3</sup> A. Skinner, in *Anth. Mem. Amer. Mus. Nat. Hist.* xii. [1914] pt. vi.

<sup>4</sup> Lowie, *Anth. Mem. Amer. Mus. Nat. Hist.* ix. 230.

<sup>5</sup> *Anth. Mem. Amer. Mus. Nat. Hist.* xi. 164.

<sup>6</sup> *11 RBEW* (1894), p. 496.

<sup>7</sup> H. R. Schoolcraft, *The Indian Tribes of the U.S.*, Philadelphia, 1853-57, ii. 79 f.; Lowie, *Anth. Mem. Amer. Mus. Nat. Hist.* xi. 110.

<sup>8</sup> *26 RBEW*, p. 185.

<sup>9</sup> *3 RBEW*, p. 87.

<sup>10</sup> E. R. Smith, *The Araucanians*, London, 1855, p. 236.

<sup>1</sup> Kidd, pp. 310, 273, 258, 23.

<sup>2</sup> *Ib.* pp. 278-280.

<sup>3</sup> D. Crantz, *Hist. of Greenland*, London, 1820, i. 193.

<sup>4</sup> H. Rink, *Tales and Traditions of the Eskimo*, Eng. tr., Edinburgh, 1875, p. 366.

<sup>5</sup> *Ib.* <sup>6</sup> *Ib.* p. 369.

<sup>7</sup> *Ib.* p. 400.

<sup>8</sup> *Ib.* pp. 54-56; Hawkes, p. 9.

<sup>9</sup> C. G. Leland, *Algonquin Legends*, Boston, 1885, p. 244.

<sup>10</sup> Lowie, in *Anth. Mem. Amer. Mus. Nat. Hist.* xi. [1913] 185.

Roman ideas have persisted to the present day. Vesalius recognized a natural spirit emanating from the liver, as a vital spirit came from the heart and an animal spirit from the brain. Mediæval belief attributed to the eating of the liver of a goat good sight after dark, for the goat could see as well during the night as during the day. In *Macbeth* the liver of a 'blaspheming Jew' is one of the concoctions used by the witches.<sup>1</sup> There was a curious belief to the effect that the liver of the mouse increased and decreased with the waxing and waning of the moon. The Saxons attributed many complaints, and some of them rightly enough, to disorders in the liver. Blood that was thick and saturated was spoken of as 'livery,' i.e. such as flows through the liver. They cured stomach and intestinal troubles by the application of a burned goat's liver 'rubbed somewhat small and laid on the womb,' or stomach.<sup>2</sup> In Italy at the present day a fresh human liver, especially that of a woman, is believed to confer magical powers upon the one who eats it.<sup>3</sup> This may be directly related to the belief recorded by Pliny that the liver of the weasel will cure pains in one's own liver.<sup>4</sup>

6. Sneezing.—From time immemorial the sneeze has been deemed worthy of notice and has usually elicited some form of salutation from bystanders or some expression from the agents. The phrase, 'not to be sneezed at,' has behind it an importance attaching to the act of sneezing to which the whole human race bears witness. Even children notice it as something peculiar and have sayings of their own, such as 'Scat!' or 'Shoo!' The origin of the importance attaching to sneezing is thus a question of psychological import as well as one of culture diffusion.

'It is,' as W. R. Halliday has remarked, 'per se a startling phenomenon to find the body, which in normal action is the slave and instrument of its owner's will and intention, behaving in a way independent of his desire or volition. Simply because it is involuntary, the twitching of the eyelid or the tingling of the ear must be miraculous. And primitive man finds a significance in everything which attracts his notice, particularly in cases where there is no obvious cause.'<sup>5</sup>

This is good psychology, and ample facts could be adduced to support it. The superstitions connected with sneezing and the omens drawn from it are noticed in art. NOSE, vol. ix. p. 398, and need not be repeated here.

7. Miscellaneous.—Many of the American Indian tribes attach some significance to belching, crackling of the joints, ringing in the ears, twitching of the eye-lid or arm or leg. Thus the Navahos frequently omit or postpone a journey if the one intending it belches or has a ringing in the ears; a Micmac, however, considers belching a sign of good luck in hunting—the hunter will soon find game. European peoples, likewise, often attach some prophetic meaning to such bodily involuntary disturbances.

LITERATURE.—This has been indicated in the article. See also the *Encyclopædia of Superstitions, Folklore, and the Occult Sciences of the World*, Milwaukee, 1903, s.v. 'Crow,' ii. 608-610, 'Owl,' ii. 870-875, 'Raven,' ii. 634-636, 'Earthquakes,' ii. 939 f., 'Eclipse,' ii. 940-943, 'Hail,' ii. 954, 'Ignis Fatuus,' ii. 951-953, 'Lightning,' ii. 956 f., 'Thunder,' ii. 1019-1023, 'Milky Way,' ii. 957, 'Rainbow,' ii. 979 f., 'Phenomena,' ii. 971 f., 'Mysterious Omens,' iii. 1289-1310, 'Volcanoes,' iii. 1032 f., 'Dreams,' i. 221-256, 'Itching,' etc., i. 257-345, 'Monsters,' iii. 1357, 'Moon Days,' iii. 1673-1675; F. Ratzel, *Hist. of Mankind*, Eng. tr., London, 1896, i. 56-59, 302-309.

W. D. WALLIS.

PRODUCTION (of wealth).—The contact of ethics and economics is more directly at the distribution (*q.v.*) and the consumption (*q.v.*) of wealth than at its production. Because it put

production before them, the classical or formal economics has often been called soulless. But it was natural at that time to put stress on the increase of capital, and on the great merit of saving. And it was easy for readers to slip wrong meanings into the terms 'productive' and 'unproductive spending' and 'productive' and 'unproductive labour.' Nor did economists wrong the actual system; it, too, made production the measure of prosperity, regarded wages as the means of keeping labour efficient, and saw in high interest and profit the best guarantee for the upkeep of capital. Neither the economists nor the system were without good reason; for, whatever the best use and distribution of wealth, these are limited by the amount of it, and by the efficiency that can be given to the three agents that produce it—nature, capital, and labour.

It is through labour that the efficiency of nature and capital is discovered and made real. Capital is its product; and, while nature does all the work, it needs directing. One has only to compare the unimproved value of nature in land and beast, plant and mineral, heat and electricity, with the value that only minds can give. Hence two ethical topics are traditional in the text-books, when they are dealing with labour as producer. One concerns its quantity, the other its quality. The first is connected with the doctrine of Malthus (see MALTHUSIANISM), the second with education, and not merely technical education, but even more with its product in grit and conscientiousness. The two questions have now a unanimous answer from ethics and economics.

When, however, we ask about the fitness not of the labourer for the economic system, but of the system for the labourer, the question becomes critical. The division of labour that is essential in the system may mean to the man monotony, ill-health, and loss of the market for his skill. All the books, since the *Wealth of Nations*, discuss the advantages and disadvantages, but the only practical question now is how to meet the disadvantage from the gain. This has been the work of factory and other labour legislation. At first the argument for higher wages, for shorter hours, and for better health was their economy as measured by the work done. Labour, however, does not rely on this argument; it claims a better share on the ground of justice; it refuses to abide by the open market measure of its price. And it is still true, though less than before, that the harder and more debasing the labour, the worse it is paid. The reason is that the lower the grade, the greater the competition. There are two ways of reducing the competition: one by combination, the other by moving some of the stress from lower to higher grades. The latter is the perfect way. It has been universal in economics since the death of the iron law of wages; the doctrine that cheap labour is necessary has come so near its end that it has disappeared from press and platform; and the right way tends to make itself permanent and easier. But progress on it must be slow, and its results are mainly enjoyed by the next generation. And so, though it would be even more necessary in a socialistic system than in the present one, there is nothing like a militant spirit on behalf of it, as there is for the other way.

Here too the quarrel between ethics and economics has been settled. But one far more serious has opened between them, on the one side, and the actual working of the industrial system. It did not appear in the early days of capitalism, when competition was unchecked. This made for the greatest production of wealth, and to ethics it seemed that the rude justice of the market could be made more and more equitable by equalizing

<sup>1</sup> Hulme, pp. 16, 177.

<sup>2</sup> Cockayne, ii. 161-163, 198-217, 235, 251, 309.

<sup>3</sup> Evans, in *Popular Science Monthly*, xlviii. [1896] 82.

<sup>4</sup> HN xxx. 16; White, ii. 88.

<sup>5</sup> P. 175.